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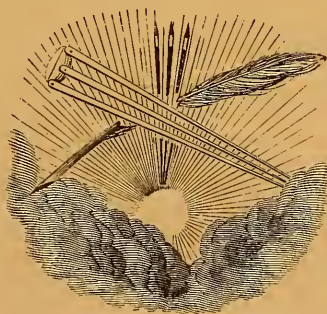
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January. "Returning from the Well." Prize Picture. By ROBINSON & CHERRILL, Tunbridge Wells, England.

February. Cabinet Portrait. Prize Picture. By WALTER C. NORTH, Utica, New York.

March. "Departed Power." Prize Picture. By JOHN C. BROWNE, Philadelphia.

April. "Dalles of the St. Croix." Competing Prize Picture. By C. T. ZIMMERMAN, St. Paul, Minnesota.

May. Studies of Children. By JOHN A. SCHOLTEN, St. Louis, Missouri.

June. Cabinet Portrait. Example from Retouched Negative. By J. H. KENT, Rochester, New York.

July. Cabinet Portrait. By JOHN L. GIBON, Philadelphia.

August. "The Last of the Queues." Cabinet Portrait. By J. LANDY, Cincinnati, Ohio.

September. "Kenilworth Castle." By ALEXANDER WILSON, Leamington, England.

October. Portrait of Abraham Bogardus. By A. BOGARDUS, New York.

November. Members of the Berlin Society for the Advancement of Photography. By J. GRASSHOFF, Berlin, Prussia.

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RETURNING FROM THE WELL.

T H E

Philadelphia Photographer.

Vol. VIII.

JANUARY, 1871.

No. 85.

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HAPPY NEW YEAR.

WE wish our readers, one and all, a happy new year, and renew our promise to do all we can for their special good and prosperity. As announced in our last we have undertaken the labor of giving them a magazine full of information more frequently. That announcement, as we hoped, has met with the most cordial approval of many of our old subscribers, and the great majority of them accompany their renewals for the *Photographer* with a subscription, and words of good cheer for the *World*.

We are gratified that our new enterprise meets such a reception, and we thank our patrons for this new evidence of trust in our promises to give them a *good* magazine twice a month.

Those who have not *subscribed* for the *World*, will do well to secure the January number soon as out. Will all please kindly examine it carefully, and do what they can towards increasing its circulation. We offer liberal premiums for such effort, and the more subscribers we have the more good we can give, and the greater good we can do; so it will be seen that it is a *mutual* affair between us.

Our *whole* time is now devoted to your interests, and may we not deserve a little of yours? Communications on all practical

and useful subjects, notes on failures, &c., always welcome.

We now present you with this, our first number for the New Year, as an earnest of what we hope to do semi-monthly during the whole of the happy New Year.

THIRD ANNUAL EXHIBITION

OF THE

National Photographic Association of the United States.

THE Third Annual Exhibition of the National Photographic Association of the United States will be held in Philadelphia, Pa., beginning the first Tuesday in June, A.D. 1871, at Horticultural Hall.

This early notice is given, to invite exhibitors from foreign countries to bear the matter in mind, and consign their parcels in good time. Ample preparation will be made to accommodate such contributions, and to care for them while here, as well as to return them when they are not to be sold for the owner. Foreign pictures will be admitted free of duties, and it is hoped to secure such arrangements as will bring very little expense for freight, if any, upon the exhibitor. Full particulars will be communicated by circular to all intending exhibitors, who will kindly address the Per-

manent Secretary for the same. Will foreign Photographic Journals please copy.

Regulations for American exhibitors will be given hereafter.

EDWARD L. WILSON,
Permanent Secretary, Philada., Pa.
W. H. RHOADS,
Local Secretary.

REMBRANDT-ISH.*

IN the last number of the *Philadelphia Photographer*, November number, 1870, I notice several articles (in which the "Rembrandt pictures" are mentioned) which seem to please some and to disgust others. If you will allow me, I should like to make a few remarks concerning the different views taken by the writers. I will commence with my friend, Mr. Ayres, who, like every artist (or one with artistic feeling), is rather in favor of the "Rembrandts," but objects to the name. Well, in one respect he is correct. It is an absurdity to call a photograph a "Rembrandt," since nothing *but* a picture by Rembrandt can be called a Rembrandt; be it oil painting or etching. May you not, however, call a painting or an etching of another, done in imitation of Rembrandt in color, touch, composition, light, &c., "*à la Rembrandt*," "after Rembrandt" "Rembrandtish?" May you not say this or that picture has a Rembrandt effect? Surely. The remark is called forth in any exhibition. And, since I call photography (as far as head and bust portraiture, and landscapes are concerned) a fine art [I may be half a century ahead of my time though], we can unquestionably say, such a photograph has a "Rembrandt effect." Others again, say, "Shadow picture," is just as bad," since the introduction of shadows is only to force out the lights to greater advantage, which is, after all, the real charm of the picture. Mr. Ayres makes some very sound remarks in his article, relating to the merit of such pictures, and thinks much good will be obtained from their adoption; but, he is very severe on old Rembrandt himself, calling

him "base and vulgar." He says, his "maddonnas" were the "bar-maids," and "his saints his coarse associates, the boors." Alas! poor Rembrandt! This may be so, friend Ayres, but it belongs not here; we have nothing whatever to do with his vulgar instincts, nor with his bar-maids and boors, but only with his method of lighting the same. I quote from your article, page 380: . . . "In this dismal place he had opportunity to study those powerful contrasts of light and shadow which subsequently rendered him the great master of *chiaroscuro*." Now, I should like to know whether it would not be a good thing for photographers to study the works of a "great master of *chiaroscuro*"? (the "bar-maids" and the "boors" will not be in the way.) Whether it would not be a real blessing for artistic photography, to have copies of the many beautiful portraits Rembrandt painted (which are the gems of European galleries), hung up in every operating-room? It would cultivate the taste of the photographer as well as that of his customer. Had the works of Rembrandt and other great masters been so made use of twenty years ago, Mr. Ayres would not have been obliged to write the following for your Journal to-day. "Doubtless the most important gain realized by this new style photograph, will be to crush out the old prejudices against shadows. Every provincial operator has wept over the unappreciative rustics who insist on having their faces taken like the full moon!—square to the front, and in complete light—whilst others refuse a three-quarter head because it is 'too black on one side!' 'But now the dose is an allopathic one; they rather like the novelty of the style, but *must* swallow down seven-eighths shadow or get no picture!' [*Philadelphia Photographer*, November number, page 381.] I protest against Mr. Ayres's assertion, that "the most insuperable objection to the use of the *name* is that it falls meaningless and dead on the ear of the hearer, even among so-called 'intelligent' persons, conveying *no idea* whatever of a person, place, or thing. Not one in a thousand who come to a photograph gallery ever heard of Rembrandt, and consequently the word is *meaningless* to them,

* Mr. Kurtz's article was intended for our December number, but among other good things was crowded out.—ED.

even though it be accepted and used; and we are not in the least surprised to read the instances mentioned by 'An Old Foggy' in our August number. Now suppose, instead of the Dutch Rembrandt, it had been the Italian painter *Carracci*; and you say to a customer: 'Will you sit for a *ka-rock-chee*?' Is it likely he would understand you, whether you were addressing him in Choctaw or Hottentot? And yet it is equally as *proper* as the more easily pronounced 'Rembrandt,' and would be just about as *comprehensible* to people in general."

"People in general," are not so very stupid as they are painted by "Old Foggy" and Mr. Ayres, and if (for the sake of argument), they are, it is the duty of the artist to cultivate them and tell them the meaning of "Rembrandt," and so it will soon cease to be to the "intelligent," either "Choctaw or Hottentot."

To teach is the mission of the artist, and if photographers wish to become artists they must do likewise, and I know the task is neither so difficult nor ungrateful as imagined. "People," especially in America, like to learn about art-matters, and are, upon the whole, apt scholars; much more so than many of the photographers themselves, who dislike to step out of a beaten track.

Another article entitled "The St. Louis Fair" (page 384), by a Mr. "Justice," contains the following: "First was A. Wolfram's collection, consisting of a fine display of cards, imperials, and 4-4s of the Rembrandt style, and the good old style that Rembrandt can't lay in the shade." What an unkind cut this is of "Justice." "Justice" will not do *justice* to Rembrandt. Again, he says of Mr. Scholten's pictures: "They are *fine*," "very *fine*," "too *fine* for photographic work;" "they look like *fine* engravings;" "they were *fine*," "very *fine*," "only too much so for photography." Our *Fair* critic is decidedly guilty of heresy in thus inciting photographers to make *less* "fine" work; it is evidently wrong to make common photographs look like "fine engravings," he seems to think. I hope Mr. Scholten, like a man of sense, will profit by the remarks

of our Fair critic, and stop his "*fine*" work at once, for the sake of "Justice!" Of what avail are "critics" if their just suggestions are disregarded? "Critics" are not men who talk merely for the pleasure of hearing their own voices, but are those who are supposed to know of what they talk, and are to be heeded. There is, perhaps, no place better than a public "show" in which to have one's work criticized. The "critic" does a great deal of good, praising what deserves praise, and finding fault where fault exists. We challenge the critic by exhibiting our work, and are glad to have the right path pointed out to us. We wish to profit by their censure, and are not afraid of it; else we would not invite it by public exhibition. All we desire of the "intelligent critic," is, that he may be competent, but *thoroughly* so,— "for a *little* learning is a dangerous thing,"— that he may fairly criticize, that *justice* may be done, *not* that *we* may be "done" by "Justice."

Again, another "critic" "went through" the Fair of the American Institute in New York, in about two pages. This gentleman signs: "Professor Towler" [I like to see people affix their signatures to what they write], and has of course something to say about "Rembrandts," but purely in an *artistic* point of view; not *chemical*. I did not know that the learned Professor was an art critic. In his article he speaks of Kurtz's collection of *colored work* in very flattering terms, and of "some photographs retouched with India-ink, as large as 25 x 32, that were exceedingly beautiful." Now the Professor will excuse me if I correct him; these pictures are simply *crayons*, and not finished in India-ink. It is not considered artistic to make such large work "exceedingly beautiful" in India-ink. The material is too thin and weak; it is more or less labor lost; crayon being used to far greater advantage on life-sized heads. Speaking of Gurney, he says: "His Rembrandt pictures were good." Of course they were. Why not say they were *very* good, and better from an artistic point of view than his pictures that were not "Rembrandts."

The Professor is evidently anti-shadowy in his feelings. I am justified in this re-

mark by the manner in which Mr. Howell's pictures are spoken of. I quote: "Howell, too, goes into the so-called Rembrandt, which seems to consist in posterior illumination, and thus throwing the front, or the side next to the camera into shade. This is a freak that must soon succumb to better taste; still it is a change, and has its advantages financially." [Rembrandt below par.] It is a "freak;" it is condemned; but the following will show that "critics" have their "freaks" also.

The Professor goes on to say: "I tried to study out the rationale of the success of the productions of such masters in the art as Kurtz, Howell, and others, and after a careful investigation, I have come to the conclusion, that the cause depends upon their possessing a true and complete knowledge of light, and an inherent taste for the beautiful and artistic. They know how to apply their light, to soften it, intensify it, in fact to control it in any way, so as to gain their ends; and they furthermore know how to make nature *natural*, whilst at the same time they can discriminate the conditions that will give to a certain nature the largest amount of beauty and comeliness." [Rembrandt stock *above* par.]

Now, allow me, Mr. Editor, to call your attention to the fact, that the Professor came, "*after careful investigation*" "*to the conclusion*" "that the success of the Rembrandt, of such masters in the art as Kurtz, and Howell, and others, consists in their complete knowledge of light, and in an inherent taste for the beautiful and artistic, which seems to consist in a posterior illumination, and that they can make nature *natural*, with the largest amount of beauty and comeliness," yet, that this "*freak must soon succumb to better taste!*"

If some, in making this style of picture, overstep a certain limit, and produce work that is *simply ridiculous*, it is hardly fair to condemn the whole thing. The best of portraits can be, and are, made in this style, and I sincerely hope the Professor will do me the favor of sitting for his portrait in my gallery, where we may talk the matter over quietly; and I still further hope to convince him that this "change" has more than mere financial advantages; and finally,

in order to put him in the right *position*, I trust a "posterior illumination" may not be necessary.

Dear Mr. Editor, I find "criticizing" so easy that I cannot conclude without asking you to publish in connection with this, a letter to Mr. Simpson. It relates to another "critic" of the "Rembrandt" in England, and seems a fit "finish" for this article.

I take pleasure in stating to you that the last Fair of the American Institute awarded to me the *first four premiums*, and that among them was the first premium for plain photographs, of which, certainly, not less than two-thirds were of the much-abused "Rembrandts."

Yours, truly,
W. KURTZ.

NEW YORK, October 6, 1870.

G. WHARTON SIMPSON, M.A., F.R.S.

MY DEAR SIR: Noticing with great pleasure, in your correspondence with the *Philadelphia Photographer* (October No., pp. 362 and 363), the kindness with which you have thought proper to deal with the "Rembrandt Portrait," I am encouraged to answer the remarks of *your* correspondent ("An Old Photographer"), in which he says: "From what I have seen of the American 'Rembrandt Portraits,' I do not think that the style will ever become popular in this country (England), and I must confess that I hope it will not."

I am led to suppose, from his very severe criticisms, that he has seen only some atrocious imitations by our rural photographers, (!) and upon which rests the sole foundation of his argument. Should this be the case, the gentleman is in error; for I might, with equal propriety, denounce all English photographs because they were the only ones (say the poorest work of some of your less skilled) it had been my lot to have beheld. Surely, vast numbers of photographs reaching this country from England are, at best, very poor imitations. The pose, invariably stereotyped; here the inevitable little table, the irrepressible columns, chairs, hanging curtains, to say nothing of the head-rest, whose foot generally makes a third in the picture, &c., &c.

But having spent some years in London,

I am, I hope, better informed, and know the above-mentioned to be but wretched imitations; and on this ground alone I think your correspondent wrong to universally condemn work of which (the best, perhaps) he knows nothing. Such well-known gentlemen as L. Thompson, the sculptor; Huntington, the President of the National Academy of Design; and Baker, the noted portrait painter in New York, who were appointed judges at our photographic exhibitions, would not, I feel quite sure, have awarded me the first premiums for the last two years had they thought my work smacked of the "*elevated or goblin school of portraiture*."

Again, the Berlin Photographic Society, which is composed of gentlemen eminently qualified to judge of the art photographic, commended my pictures in a high degree. The French would not have placed my work in a conspicuous portion of the *Salon*, nor would your Paris correspondent, I think, have written so flattering a notice in his letter, had they entertained the impression that I was "*overstepping the modesty of nature*."

Your correspondent further says: "The argument of Mr. Kurtz in their favor, quoted in your last, will not hold water," and that "ordinary faces lighted in an ordinary manner will always be ordinary."

Very true. I am also of this opinion, but he should, however, have done me the justice to remember that, in that same letter (the one written to the *Berlin Photographic Journal*), I distinctly stated that "it will be an absurdity to light *all* faces in this way."

I believe it is generally known that my sitters are placed upon a movable platform, which allows of being so adjusted that the light on the sitter may be varied at pleasure. In order to further convince your correspondent that I do *not* light all my subjects in what is called the Rembrandt style [although I was the first to introduce it, which naturally creates an interest in this direction], I will send you a dozen or so of my imperial cards, that you may plainly see the *old style of lighting* (!) is not neglected, and that the pictures which con-

sist chiefly of shadows and half-shadows, and in which the lights are sparingly introduced, are *not* such absurdities as your "Old Photographer" makes them out to be.

And now as to the other "photograph man" (to whom you refer, and who protests against the picture in the *Philadelphia Photographer*), who signs himself "Old Foggy:" why, he and his prototype are, I fear, both old together, whilst I am unfortunately young; and further, if they think *my* manner of lighting "makes the cook suggest the idea of a Lady Macbeth," I am very much afraid that *their* style of lighting will make the Lady Macbeth suggest the cook.

I am, with very great respect,

Sincerely yours,
W. KURTZ.

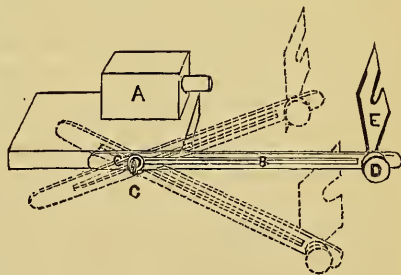
872 BROADWAY, N. Y.

VIGNETTING IN THE CAMERA.

BY G. W. EDMONDSON.

APPROVING of the counsel given us by the editor of this magazine to *give*, and not *patent* our little "wrinkles and dodges," I will describe a little contrivance which I find exceedingly useful for vignetting in the camera. A drawing will make the matter more plainly understood.

A represents the camera-box, moved to one side of the top of the stand, in order to



delineate the other parts more easily. B is a strip of one-half inch walnut, of any proper length, with a slot in it nearly the whole length. E is a piece of stiff cardboard, cut to the shape in the drawing, and attached to the end of the strip B by the screw-knob D,

by means of which it may be turned at any angle desired. The strip B is fastened to one side of the top of the camera-stand by means of another screw-knob at C, on which it is also worked back and forth. It also enables us to control the whole apparatus, and by loosening it we may move it up or down, as shown by the dotted lines. If you wish to prevent an abrupt line, work the card E back and forth gently during exposure, by means of the knob D. I find it to answer perfectly, and hope the idea may benefit some of the trade, especially the members of the National Photographic Association, to which I have the honor to belong.

ON VARIOUS PHOTOGRAPHIC SUBJECTS.

BY M. CAREY LEA.

I. COLLODIO-BROMIDE DRY PLATES.

DURING two or three years past I have expended a very large amount of time and trouble in testing the effects of a very wide range of substances as preservatives for dry plates, especially of collodio-bromide dry plates. I found many substances giving excellent results.

Litmus I have already spoken of. It gives very fine soft negatives, yielding pleasant and harmonious prints. The prints of mine, which were exhibited at the Cleveland Exhibition, were all from plates prepared with this preservative. I found, however, by use and familiarity with the process, that the invisible image lost strength more rapidly on litmus plates than on those prepared with other preservatives. This cause, and the discovery of other modes of preparation, free from this objection and more sensitive, have led me to give up litmus.

Cloves.—I mentioned some time back that a decoction of clove-heads, made with hot water, and filtered after standing a day with the cloves, gave excellent results; clean bright negatives. Less sensitive, however, than—

Flavin.—This substance gives very sensitive plates, more sensitive than either tannin or litmus. (Flavin is a dye-stuff prepared from oak-bark. It is by some writers

considered to consist chiefly of quercitrine, by others of quercetine. This last is a decomposition-product of the former. Quercitrine, when heated, splits up into quercetine and a saccharoid body. From my observations I should say that flavin consists chiefly of quercitrine, not of quercetine.) But the use of flavin is liable to a very curious objection. If the sky be much over-exposed it becomes honeycombed with curious lines, resembling a sort of mosaic. This took place, at least, with the pyroxyline which I use. Perhaps with a collodion exactly suitable this might have been otherwise. This preservative should be used in conjunction with gum and sugar, ten or twelve grains each of gum and of sugar to the ounce. The same with—

Carmin-sulphate of Lime.—I now come to the most sensitive and best of all the preservatives that I have been able to find. It is prepared by treating cochineal insects with fuming sulphuric acid, diluting and neutralizing with lime. The details are as follows:

Grind up $1\frac{1}{2}$ ounces of good clean cochineal in a mortar with 1 fluid ounce of fuming sulphuric acid. As the paste becomes thick, add gradually more acid until in all 2 fluid ounces have been added. When well mixed up, transfer into a clean, dry, wide-mouthed vial; wipe the inside of the neck, cork, and set in a vessel of hot water. Set aside for a week, then stir well up with water, add slacked lime till the mixture turns red litmus-paper blue. Throw on a filter and add water until the filtrate fills a half-gallon bottle (80 ounces is the usual contents of what are sold as half-gallon bottles). Add a quarter of an ounce of carbolic acid.

The amount thus obtained will last even an active and energetic worker for a very long time. To use it and prepare a preservative bath for whole-size plates, take

Above solution, . . .	$\frac{3}{4}$ ounce.
Water, . . .	7 ounces.
Gum, Sugar, each . . .	80 grains.

Plates prepared with this preservative are about twice as sensitive as those made with tannin, gum, and sugar. They differ from all other collodio-bromide plates in this: that in all others, the image is of a

brown color. In plates prepared after the above formula there is not a trace of brown; the plates are pure gray-black. I have never before seen this shade in dry plates; they print softly and well, with no tendency to harshness.

Although carmine is not supposed to be one of the substances capable of forming a copulated compound with sulphuric acid, yet it appears most probable that it does. The above process yields abundance of an organic lime salt, very distinguishable from sulphate of lime by its ready solubility in water. And this ready solubility of the lime salt is generally a characteristic of copulated sulphuric acids, and furnishes an easy mode of distinguishing them from the almost insoluble ordinary sulphate of lime.

Sensitive mixture.—I find with these very sensitive preparations that the collodio-bromide mixture may be made much thinner, and in this condition it is easier to make a smooth plate. I recommend:

Ether, Concentrated,	. 8 ounces.
Alcohol, 95 p. c. pure,	. 4 “
Ordinary Crystallized Bromide of Cadmium (Cd. Br. + 4 HO),	. 1 drachm.
Bromide of Ammonium,	. 12 grains.
Intense Pyroxyline,	. 84 grains.

This should be kept at least a month in a warm light room. When wanted for use, take out such portion as may be wanted, and sensitize, in hot weather with 9 grains nitrate of silver, in cool or cold weather with 10 grains. This still leaves a large excess of nitrate of silver, as the exact equivalent of the bromides in an ounce of the collodion is between 6 and 7 grains of nitrate of silver. Dissolve this nitrate, which should be in fine powder, in 95 p. c. alcohol, allowing a quarter-ounce to each 9 or 10 grains as the case may be. Add, at first, about half the alcohol, boil gently and carefully over a gas flame. As soon as it boils, remove and agitate carefully. When the alcohol seems pretty well saturated, pour off into the collodion. Next add more alcohol and repeat, till all is got in. This is the only mode of operating which actually gets the nitrate of silver into solution; other methods leave a considerable amount undissolved, and therefore comparatively

useless. One good shaking after the addition is sufficient. The mixture should stand eight to twelve hours before being used. It is safest not to keep it longer than twelve hours.

Before, however, adding the nitrate, it is necessary to *acidify the collodion with aqua regia*. The use of nitrate of silver in excess (that is, beyond what is necessary for the complete decomposition of the bromides), and the acidification, form the distinctive features of my method of working the collodio-bromide process. They cannot be separated, but supplement each other. The use of nitrate of silver, in excess, gives great sensitiveness, but if the acid were not present, the plates would fog. It is important to bear this fact clearly in mind: if the aqua regia is forgotten, every plate must be expected to fog. The proper proportion of aqua regia is two drops to the ounce of collodion.

With a good light, these plates are as sensitive as wet collodion plates. The development is, of course, by the alkaline method.

Keeping qualities.—The keeping qualities of these plates are very satisfactory. On November 25th I developed a plate which had been made on the 10th August, and was therefore three and a half months old. It did not appear to have lost in sensitiveness, and was clean and clear of fog.

Some specimens of work by this process will be shown by the Editor of the *Photographer*, to those who may care to inspect them. Since I discovered the method I have used it exclusively for taking views.

II. DUST.

I believe that dust floating in the atmosphere occasions more annoyance to the photographer than is often realized; that is, that troubles really arising from dust are often attributed to other causes. For example, to *imperfect filtering*. A glass plate is thoroughly cleaned, well brushed with a flat camel's-hair brush, and then coated. Although the collodion was supposed to be all right, yet as the coat sets, it shows somewhere a little knot or warty place, perhaps more than one. Now, that this *may* have arisen from imperfect filtration is certain, but it much more often re-

sults from motes or filaments of dust settling on the plate in the moments that intervene between brushing off and coating. In a weak light of the dark-room it is difficult to see dust in the atmosphere; even in a room ordinarily lighted it is not easy, but if a glass plate be held in bright sunshine, and then brushed and coated, the agency of the dust becomes at once apparent.

So *pinkholes* are sometimes caused by dust in the camera settling on the plate. This effect is more generally understood than the former.

In *varnishing negatives* it constantly happens that, although the negative may have been brushed off immediately before applying the varnish, and though the varnish may be perfectly bright, nevertheless the coat as it dries shows irregularities. These when examined with a lens will generally be found due to a little filament of wool, coiled up in them, and arising from the wear and friction of clothes or carpets.

UNDER THE SKYLIGHT.

BY ROLAND VANWEIKE.

No. V.

Groups.

As we are to have a large group to make this morning, Focus, I will give you some explanations in reference to that kind of work before the parties arrive.

"All right; I'b ready to leard. But since our lesson od babies, I've been wonderig how you madage with babies id groups."

We don't intend to put babies in groups with grown persons, Focus. The photog-rapher who attempts impossibilities, or absurdities, only injures his reputation, besides wasting his time. To attempt a group with young children in it, on anything larger than a 4-4, is an absurdity, unless it be made out of doors, where you get an almost instantaneous picture, and even then the evil arising from difference in exposure necessary still exists, for whether under the skylight or in the open air, if the child is right, the grown person is underexposed, and if the latter be right, the child is overdone.

"Well, but what bakes the difference?"

Why, young children are almost invari-

ably very fair, and a picture can be made of a child in much less time than of an adult, especially a coarse-featured man with a sun-burnt face; besides, children generally wear light drapery, which reflects a great deal of light, and requires a very short exposure, while grown persons wear dark drapery, that needs a long exposure, and when the two are brought together in a picture it is difficult to harmonize them. Though this can be more easily done where sufficient time can be had, but with young children in a group, the difficulty is to get exposure enough for dark drapery.

"Well, if beople will have zuch work dode, they must dake what they can get."

But that is not the point. They do not discriminate in these matters, and anything we undertake to do they expect us to do it well.

"Yes, I zee; but we haved't ady babies in this group that's cobig."

No; but I want to put you on your guard, so that when Mr. George Washington Jackson Pumpkinberry comes in with his family of eleven children, the youngest three months old, and a regular tearer, and wants a group including himself and the mother, you may know what to do.

"I'll send them hobe, or tell them to go sobewhere else."

O, no, that would not be necessary; rather explain the matter to them, and persuade them to have what you can make. A group of the older portion of the family will do, and take the younger ones separately.

"Well, but how is the best way to arrange a group?"

That depends upon circumstances. In arranging a group containing a number of persons, we are restricted to certain limits which render it difficult to produce anything of the "genré" or composition style. In this respect, the artist with the brush or pencil has a decided advantage over us, as he can place his subjects where it may please him best, in expressing the idea he wishes to convey, as well as to produce the most artistic effect. But he *must* make his picture express a thought—something in it that can be read and understood by everybody; it must be a sort of creation of his own, from

beginning to end, while we are to catch the semblance of face and form that already exist, and in which is centred the great interest in all our work.

"But what are the libits we are confined to?"

I'll tell you, directly. When we get large instruments with ten feet depth of focus, and quick-working chemicals that will make a picture in from one to three seconds, then we may make groups with any arrangement they or we may choose; but at present we are limited to the focus of the lens, and the most we can do is to place the several subjects in positions that will give the most ease and grace, according to age, size, sex, &c., each bearing a proper relation to the other, and forming a pleasing and harmonious whole. The following rules I have generally observed in making groups: Place the largest and tallest in the centre; the eldest seated and in the centre, if practicable; subjects on either wing seated, unless very short; no two together in the same position; subjects on either side should not look from the centre; never allow all to look to the front; avoid too many lines in one direction; make one balance another; be careful not to crowd your subjects; give each one room to be easy.

"Why, I don't know as I can remember all that. Do you use the same instruments you do for single pictures?"

We can do so, Focus, if the instrument is good for groups. For small work it don't make so much difference, but for large work there are many very fine instruments for single subjects that will not make a group of more than two. An instrument for groups must have good breadth of focus, cutting a line as sharp on the outside as in the centre. There are some instruments in use—many of them, I might say—of rather short focus, that have great breadth of field, but there is a great objection to them, in that they form a group on a half circle, bringing the outsides so far front that the subjects in the centre are comparatively small and seem far away, while those on the wings are distorted by the rays of light striking the plate at so sharp an angle. This we saw very pointedly illustrated by Dr. Vogel not long since. An instrument

of good length of focus may work a little slower, but the superior execution will more than compensate for the additional time.

"Tibe is bodey!"

Not much money, Focus, when at the expense of a good picture. Another very important point in photographing groups is the light. A light that is all that can be desired for single subjects may not do at all for large groups. We need a good broad light that will cover the group all over alike, leaving no subject crowded against the wall, or apparently in the dark. With a proper arrangement of curtains, the light may be concentrated so as to get the direct rays mainly from one direction.

"The group has cobe."

Very well; how many are there? There's the father and mother, two sons, and two daughters; six. That's good. Now the first thing is to ascertain if they have any choice as to who are together, and who shall stand or sit. These matters must be settled before we commence, and we will conform to what they wish as far as possible; but *we* must make the group, and they must understand that the general arrangement of it is in our hands, and the more quiet they keep, and the more readily they conform to what we require of them, the sooner we shall get through, and the more successful will be the result. As for holding a discussion among themselves after they are in position, as to the best arrangement, which way this one shall sit and how that one shall stand, and getting out of place as fast as we can fix them, that will never do. We must use a little decision in this respect, and when we give them a good picture they will respect us all the more for it. Odd numbers in groups can be more easily arranged than even, but in this case we will have four seated and two standing. The father may be seated in the centre, the mother on one side, with space enough between for the youngest daughter to sit on a cricket or hassock, and rest on her mother's lap, the other daughter may be seated on the other side. This leaves two spaces for the young gents to stand behind. We form the line nearly straight to begin with. Now get a focus on the father; the outsides are now back. Bring each one forward till all

come into the focus of the instrument; place the head-rests as fast as they are right, and we have the arrangement complete. The background may be plain, or an architectural or scenery ground will look well. For large groups, a composition background, made up of plain, architectural, and scenery, if judiciously arranged, looks very pretty. This is sometimes a necessity where two or three separate grounds are required to cover the group. If a plain ground be used, and made up of two or more pieces, they should be joined very closely, so as not to show the joint, or, what is better, let one lap the other and keep it in motion during the exposure; this makes a perfect blending, and you have a plain, smooth ground. Now, the last thing before exposure is to give the direction for the eyes, and see that each subject has the proper pose; don't let the old gent draw both feet under the chair so much; bring one forward; that's better. There seems rather too much space on each side; bring in the curtain on one side, and place the table on the other. Don't have quite so many hands in view; the gents standing may place one or both hands behind them, though; avoid having them both alike. That's very well; now all keep their positions very steady, and in about thirty or thirty-five seconds we have them.

"Good! I believe I could do that dow, byself."

Very well, Focus, you will find your own practice the best teacher. The hints I have given may serve to guide you somewhat, and will be applicable to any groups you may have to make, whether large or small.

PROCEEDINGS

OF THE

Executive Committee of the National Photographic Association.

A SPECIAL meeting of the Executive Committee was held at No. 36 Park Row, New York, at 3½ P.M., Monday, December 5th, 1870.

Mr. W. Irving Adams, chairman of the Committee, presided.

The reading of the minutes of the last meeting was dispensed with.

The report of the Treasurer was read, as follows:

W. IRVING ADAMS, Esq.,

Chairman Ex. Com. N. P. A.

DEAR SIR: I have the honor to report—

Amount received from H. T. Anthony,
and dues received to December 1,
1870, \$1569 56

Paid out.

July 15. Benerman & Wilson, per your order,	252 03
July 15. N. Ross,	2 00
July 28. E. Y. Bell,	100 00
Sept. 2. T. M. Peirce,	15 00
" 30. Sherman & Co.,	116 50

\$485 53

Balance on hand, \$1084 03

August 15. I deposited in the Citizens' Savings Bank, southwest corner Bowery and Canal Street, New York city, \$1000, which is subject to the order of A. Moore, Treasurer National Photographic Association. The balance is on hand.

I am, yours truly,

ALBERT MOORE,

Treasurer N. P. A.

PHILADELPHIA, Dec. 3, 1870.

The report was accepted, and ordered to be published.

The Secretary exhibited proofs of the certificate of membership, and stated that copies would be sent to all the members before the holidays.

A review of the photographic patent cases now pending was taken, and hopes entertained that the trade would soon be freed from illicit claims.

Other matters concerning the welfare of the membership were considered, the Exhibition, &c.; and the Treasurer will soon issue a request for the payment of dues, which must be promptly met, in order to enable the committee to act in important matters.

IF the dust and dirt of summer lingers on your skylight blinds and curtains, either wash them well, or better, get new ones.

Certificate of Membership of the National Photographic Association.

It is always a pleasure to look at neat and beautiful works of art, and it is gratifying, therefore, to find that the Executive Committee of the National Photographic Association have shown excellent taste in designing the certificate of membership, and license to use the trade-mark, combined, which has been distributed to the members during the past month.

It was, no doubt, a pleasant and acceptable holiday surprise from the Association to its members, and by this time it is probably framed and hung conspicuously in the galleries of hundreds of photographers in all parts of the land.

Our pen is too imbecile to describe it, yet we will try, for we desire that every live reader of our Magazine should have one.

It is a steel-plate engraving, by the American Bank Note Company, Philadelphia, on fine white Bristol board, $7\frac{1}{2}$ x 12 inches. The body of the certificate is in a fine bold running hand; the name of the Association in handsomely shaded German text; the monogram elegantly engraved on the left lower corner, and the signatures of the proper officers appended. It is exceedingly neat and beautiful.

The Secretary has mailed a copy to every member of the Association, with their names handsomely inserted. Each one was securely enveloped with a stiff straw board, to prevent breakage on the way, but if any are received in a damaged condition, or if any names are misspelled, duplicates will be supplied on the first one being returned. If any fail to receive their copies, they will at once report that fact to the Secretary. Parties who join the Association hereafter will be at once supplied with the certificate, and we hope there will be hundreds of applications for it, for every live photographer should be proud to identify himself with this Association.

BY referring to their advertisement it will be seen that Messrs. Cresscup & West furnish another style of the monogram, and also a hand stamp, for stamping cards, labels, &c. Both pretty and useful.

SIMPSONTYPES, OR COLLODIO-CHLORIDE PICTURES.

BY PROF. J. TOWLER, M.D.

PRINTING on opal glass or on plates of porcelain is easily and satisfactorily effected by means of the collodio-chloride process, as first recommended by G. Wharton Simpson, M.A., hence its name, Simpsontype. In this process, however, a necessary condition is this: the negative must be taken on perfectly flat glass, and the porcelain plate must in like manner be quite flat. Use, therefore, for the negative plate glass, and for the opal picture, porcelain plates that have been ground flat by fine sand and emery. Both of these sorts of glass can be had from the stockdealers, or you may prepare the latter yourself from the ordinary porcelain plates.

TO GRIND PORCELAIN PLATES FLAT.

Select for this purpose plates that are already as nearly flat as possible. By way of example, we will suppose you wish to grind a half-plate perfectly flat. Place a slab of thick plate glass, or this failing, take one of the smooth flat iron disks from the kitchen stove, and place it on the table before you; strew upon its upper surface some emery powder (this need not be very fine for the beginning), and moisten it with water. Next fix the porcelain plate on a flat piece of inch-pine, slightly larger than the plate is, by means of a few tacks on the sides (the heads of the tacks must not project as high as the surface of the plate); or any other plan can be adopted that will hold the plate in its place on the small board, which serves as a handle by which the plate can be ground backwards and forwards over the emery. Another plan is to grind two surfaces at the same time. This is effected by fixing one plate on the table, itself in place of the glass slab, and then placing emery on this plate. The mode of grinding is not to move the upper plate in a straight line backwards and forwards, but to give the plate a sort of circular or elliptical motion backwards and forwards, that is to say, from end to end and from side to side. Supply the surfaces well with emery and water, and do not be scanty with your mus-

cular action. Soon the surfaces will be ground flat, that is, they will lie on each other in perfect apposition. As soon as this is the case, use the finest emery, washing off the former, and polish the surface. You cannot easily again obtain the original glaze or gloss of surface by grinding, for the glaze is the result of fusion; nor is this necessary; on the contrary it is rather an advantage, by giving to the picture a softer appearance than when it is taken on an ordinary glossy plate.

Another requisite to success in the collodio-chloride process is the peculiarly constructed printing-frame; for you must observe here that this process resembles the ordinary paper-printing process, each being sensitized, that is, the paper and the porcelain plate, with a film of chloride of silver, which film is placed in contact with the negative picture. Now during the printing we can easily examine the progress of printing of a paper picture, by simply opening the door at the back and *lifting up* the paper; but we cannot lift up a part of the porcelain plate and examine the picture. Hence, I say, we require a printing-frame so constructed as to allow an inspection of the picture without changing the relative position of the negative and the ground opal glass. Such frames are kept in stock by the principal stockdealers, and answer the purpose in a very satisfactory manner.

COATING THE PORCELAIN PLATE.

The porcelain plate is cleaned like any other plate; it seems to be a conclusion, however, that the substratum of albumen is injurious, that is, that the picture is apt to fade when the plate is thus prepared; we cannot say from our own experience that this is the case. If this coating of albumen is omitted, great caution is required in the subsequent operations of toning, fixing, and washing, to prevent the collodion film from becoming detached from the plate. To obviate this to a certain extent, you may proceed round the edges to the depth of one-eighth of an inch with a strong solution of albumen, after the plate has been coated with collodion and dried, either before exposure or afterwards, or still preferably before the plate is coated with collodion.

No. 1.

PLAIN COLLODION.

Alcohol (concentrated),	5 ounces.
Ether	5 "
Pyroxyline,	60 grains.

No. 2.

NITRATE OF SILVER SOLUTION.

Nitrate of Silver,	2 drachms.
Distilled or pure Rain Water,	2 "

No. 3.

CHLORIDE OF STRONTIUM SOLUTION.

Chloride of Strontium,	64 grains.
Alcohol,	2 ounces.

No. 4.

TARTARIC ACID SOLUTION.

Tartaric Acid,	64 grains.
Alcohol,	2 ounces.

SENSITIVE COLLODION.

Plain Collodion,	2 ounces.
No. 2 Solution,	30 minims
(mixed with 1 drachm of Alcohol).	
No. 3 Solution,	1 drachm.
No. 4 Solution,	30 minims.

This collodion is sensitized in the dark-room; the ingredients are added in rotation; No. 3 is added gradually, shaking the mixture after each addition. In half an hour the collodion is ready for use. It is advisable not to make much more than is required for each occasion, and at all events to keep the collodion under cover to protect it from the light.

The plate is coated with this collodion in the usual way; as soon as the film has set, it is dried over the stove; when cool it is ready for the printing operation. In order to know how to proceed, you must first study the nature of your particular frame; the principle is to place the negative film and the sensitive collodion-film in intimate apposition, and to be enabled to raise the latter from the former, to examine the print, without disturbing the relative positions of these films. The philosophy of action you will see at once when you examine the frame.

It is necessary to print deep, that is, to slightly over-print. Of course no development is required in this process.

As soon as the print is taken from the

frame, it is immersed in a very weak toning solution, an old and dilute bath being the most manageable; for a strong toning solution is apt to be much too energetic, and to give the print an inky tone. Withdraw the plate even before it begins to assume a purple tone. The toned picture is fixed in a solution of hyposulphite of soda.

FIXING SOLUTION.

Water, 7 ounces.
Hypsulphite of Soda, . . 1 ounce.

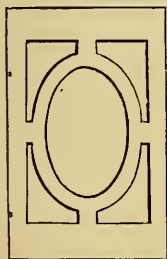
The plate is left in this solution for five or six minutes, and then washed under the tap thoroughly; it is finally flushed with a solution of common salt, and again washed. After this the plate is allowed to drain, and is finally dried.

Porcelain pictures prepared on ground glass are especially adapted for the reception of colors, from the fact that the whole surface is granulated; and it is universally admitted that a colored porcelain picture surpasses all other colored photographs in richness, brilliancy, and beauty. Full instructions for laying on the colors on porcelain, will be found in Ayres's inestimable little manual on Photographic Coloring.

Skeleton Pattern for Ferrotypes Plates.

BY J. M. HOUGHTON.

INCLOSED please find design for skeleton pattern to facilitate the cutting of ferroplates, for either the new receptacle mat suggested by myself, or useful for the old mat; as by the use of something of this kind, the operator will get his plates a respectable shape, instead of *all shapes*, as we frequently see them. This pattern can be



gotten up either singly, or in clusters, of all the different sizes used. It can be of metal, say brass, or hard rubber. Even cardboard would last a good while with careful usage.

I see that two objections were urged against the receptacle mat by the Ferrotypes' Association. The first one is

met by the use of the skeleton pattern, gotten up of the shape of the inclosed sample. The operator can see exactly what he is doing, and do the work *quickly*, and get the plates the *proper size* to suit the receptacle in the mat he is using. The second objection does not *amount to anything*; for the new mat is, or need be, *no thicker* with the plate imbedded in it, than the old one with the plate *upon the surface* of it. The thickness of the *whole picture when finished*, is about the same, whether with the new or old mat. The advantages of the new one will readily be seen by all, for much neater work can be gotten up with it than is possible with the old one. I have seen plenty of ferrotypes *skinned off* the card of the old pattern, in getting them into the album, or even in carrying in the pocket. *Thinner backing* can be used with the new mat, to keep the plate in place, than would answer with the old one. I hope the "Association" will investigate this matter more closely, and reconsider the question. I should like to see some improvement in the appearance of ferrotypes as well as photographs, for both tend to help the whole business, and the neater they can be gotten up, the better for the art as well as the customer.

PHOTOGRAPHIC MOSAICS.

PHOTOGRAPHIC MOSAICS, 1871, is being received with more enthusiasm even than its predecessors. Over two thousand copies were gone before the book was fifteen days of age, and still the orders come. There are only one thousand copies left.

It is full of capital articles, most of them written especially for it, by practical men well able to write, but whose busy labor seldom allows them to do it, thus making what they say more precious. Witness from their articles some of the

GEMS OF MOSAICS.

"The principal advantage of the ammonio-sulphate of iron developer is the softness of the resulting negative, and freedom from harsh, chalky high lights." See article on this subject by J. C. Browne.

"To enlarge photographs, or copy them if mounted, polish them well with wax, so

as to fill up the pores, then put the photo on a piece of plate glass in a pressure-frame, and copy it in diffused light;" from an excellent article on copying, by Wm. Bell.

"The sooner we put a value on our time and material the sooner we shall rise to dignity, and gain release from much annoyance;" from "What I Know of Sitters," by J. H. Kent.

"No matter where you are, or how humble your studio, remember that the same light shines, and the same wonderful laws govern your chemicals, which serve your more favored and pretentious brethren. Let your light shine;" from "Which Way?" by George B. Ayres.

"If a process works well, do not deviate from it at the recommendation of an outsider, before you have previously examined the circumstances and causes." Prof. Towler, in "Condensed Photography."

"Mrs. P. Come down, Charley, come down. I ain't a going to swallow that, you know."

"Charley. No, but it's true, aunty; and what is still more extraordinary,"—See Mr. Egbert Anderson's instructive article on "Sugar-Coated Optics," &c.

"The man who keeps his gallery neat and clean, with attractive specimens of his work well arranged on his walls, provides entertainment for waiting customers, and carries a cheerful face and happy heart himself, will find little impatience in his sitters." Roland Vanweike.

"It will not be out of place to caution beginners about worthless patents, receipts, secret processes, and a hundred other things that are springing up every day, to draw from the pockets of the fraternity their last dollar, for things that, in general, are useless, impractical, or worthless." J. H. Fitzgibbon, in "Advice to Beginners."

(To be continued.)

WRINKLES AND DODGES.

EDITOR PHOTOGRAPHER: I have found nothing in ten years' practice of photography for intensifying, as nice and uniform as a little bichloride of mercury, weak solution, wash, then apply a weak solution of chloride of gold. The operation can be repeated, al-

ternating between the gold and bichloride, till almost any degree of intensity can be obtained, if you have any detail at all. Wash well between each operation, beginning with the mercury. PHOTO.

TONING.—This is the toning formula I promised to send to you.

Neutralize sufficient gold with bicarbonate of soda, for your prints, and when ready to tone, add to the water the prints are immersed in, three or four drops of bromide of sodium. Then add the gold. Tone the prints, leaving them warmer in tone than desired, as they dry up darker. Fix as usual.

I keep the bromide of sodium in solution, about 75 grains to the ounce of water. This amount will last three or four months. I have always found this bath to tone readily, and give rich brown or chocolate tones. The more sodium the more red the tone. Use a fresh bath every time. When prints are over-printed, this bath is excellent, as you can add a little more sodium and gold, and the richness will be preserved and the prints toned as light as you want. It gives no harsh contrasts.

This bath gives beautiful tones to porcelain.

CHARLES E. SMITH.

CLEANING GLASS.—I adopt the most simple method, which is generally the best. I adhere to the rottenstone, alcohol, and water, but the buff leather I have given up. I found old rags to suit much better, and they can be washed more easily when dirty. I found nothing equal to an old cotton stocking-leg; the twill gives it what artists call a "tooth," a good quality for cleaning glass, and it possesses another peculiarity, which is I think of considerable value; it leaves no lint on the glass to be brushed off when you are in a hurry, as most other cotton goods will do. I take my glass after it has been washed, fix it in the vice, and throw on a few drops of a mixture of rottenstone, alcohol, and water; this I rub over the glass with an old stocking, which if kept otherwise clean, will answer a long time without washing. I then finish with a clean piece kept for the purpose. I feel confident that whoever tries the old stock-

ing will be pleased. The practice of coating the glass first with albumen I do not like. I have thought that the negative treated in that way grew more intense, which if true must be owing to the albumen getting yellow with age. I know that many good artists adopt and recommend this plan, but there are some who still polish their glass, and it is to them that I would recommend the old stocking-leg.

M. P. SIMONS.

IRON AND PYRO MIXED.—I can recommend the following: I take a new iron developer, twenty grains to the ounce, and when I go out to make landscapes, I carry my pyrogallic acid in a bottle, and mix the dry acid on the spot, making about what I think I shall want in one or two hours. I put the dry acid into the iron developer, and shake until it is dissolved. I am guided by the work I am doing as to quantity, and the color of the developer is a good guide as to the quantity of pyro you have put in. The more pyro, the darker the developer. It is well to keep it as much as possible in the shade, for it sometimes turns black and inky if exposed to the light. It is excellent where short exposures are necessary. I have done some good work with it, and although I prefer the iron alone for some work, I always have it at hand in case of need. K.

PHOTOGRAPHERS who live in country towns don't have running water in their rooms, as do the fortunate city photographers, and sometimes are compelled to carry it some distance from their rooms, and then up one or two flights of stairs. I was one of that unfortunate class, but soon got tired of it. I fixed a crane at one of my back windows; it is hinged to the side of the window, and is provided with two pulleys, over which a rope passes. The outer rope has a hook attached to the end, which hooks into a large screw eye, screwed into the wooden part of the handle of the bucket. Now when the inside rope is pulled, up goes the bucket, and then by means of the short rope, the crane is swung inside, and the water emptied into a barrel kept for the purpose. By letting go of the bucket it swings out, and down to the ground. I use

it for wood and coal also, and I can pull as much up in ten minutes, as could be carried up the stairs in half an hour, and with one-fourth the labor. The rope should, be at least one half inch in diameter, so as to be easily held. Of course the crane is just low enough to swing under the sash when raised. Wooden wheels run the easiest, with hickory pivots. I use two buckets.

A. E. TURNBULL.

I HAVE been troubled with my collodion drying in holes on the plate, and have tried alcohol to reduce it, but almost always with bad results, and it has become a serious matter with me. A collodion reduced with alcohol loses its sensitiveness, and if it is not nearly absolute, it will dry in holes almost as bad as before reducing, on account of the water it contains. It became of so much importance to me, that I began at the root of the matter and thought it up to the branches. In the first place, a good and well-balanced collodion is all right to use, but in keeping it must lose its ether much faster than its alcohol; then what does it want? ether, of course, and experience has proved it to me, to my delight, for with collodion that was useless to me before without alcohol, I now have by adding ether a beautiful film, with which I can get the most delicate skies, and without any perceptible loss of sensitiveness. K.

PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.

A STATED meeting of the Society was held December 7th, 1870, the President, J. C. Browne, Esq., in the chair.

On motion, the reading of the minutes of the last meeting was dispensed with.

Mr. Bates exhibited a portable tent for wet and dry work; the form being somewhat like a truncated cone, the top and bottom stiffened with light steel hoops. When in use, it is thrown over the body of the operator and supported by his head, the arms being free to move in any direction.

The President introduced Messrs. Bell, Carbutt, Chute, Moore, Shoemaker, and others, members of the Pennsylvania Photographic Association.

Mr. Bell then donated to the Society a number of very fine lantern transparencies. He uses a modification of the gum-tannin process of Mr. Gordon, and after fixing and toning with gold, *refixes*. He says that in his hands this second fixing is essential, for the gold otherwise seems to turn to a pink hue.

A cloth-bound copy of the *Photographic Mosaics* for 1871, was presented to the Society by Messrs. Benerman & Wilson.

Mr. Edward L. Wilson exhibited a series of pictures illustrating five different methods of photo-mechanical printing, namely, Woodbury's, Albert's, Edwards's, Obernetter's, and Egloffstein's. Among them were some prints made by Mr. Carbutt by the Woodbury process. These were much admired, especially for their warm sepia tone, and it is stated that the image can be reversed right and left at will. These are the first prints made in this country by the Woodbury process.

Mr. Sturgis exhibited a series of solar enlargements made on the full-size albumen sheet. They were very sharp, considering that the negatives used were only three inches square. The prints were made by Mr. Albert Moore, of this city.

The annual award of Prizes being now in order, the competitors presented their pictures, and after a short recess, which was given in order to allow the judges, Messrs. Bates, Corlies, and Pepper, to come to a determination, it was announced that the medal for Landscape was awarded to Mr. Eilerslie Wallace, Jr., and the Portrait Prize to Mr. John C. Browne.

Mr. Corlies exhibited a handsome book written by Prof. Hayden, and entitled "Sun Pictures of Rocky Mountain Scenery." The photographic illustrations were made by A. J. Russel, of New York, and were of great interest. The book was much admired by the members.

A unanimous vote of thanks was tendered to Messrs. Bell, and Benerman & Wilson, for their donations.

After adjournment, Mr. Bell's transparencies were shown in the lantern, together with some by the President, and they were all much praised. Among them was an exceedingly successful one of a *live rattlesnake*;

the scales, rattles, head, &c., being rendered with the greatest fidelity. The negative was made by Mr. James F. Gibson.

ELLERSLIE WALLACE, JR.,
Recording Secretary.

PENNSYLVANIA PHOTOGRAPHIC ASSOCIATION.

THE regular stated meeting was held at the store of Messrs. Wilson, Hood & Co., No. 822 Arch Street, Philadelphia, on the evening of the second Monday in December (12th), the President, William H. Rhoads, presiding.

The records of the last meeting were read and approved. Messrs. William H. Whitehead (Pittsburg) and F. Gutekunst were elected members of the Association.

The Committee on Insurance reported progress; and a resolution to form an insurance band was passed by the meeting.

The Treasurer's report was read, accepted, and filed.

The election of officers for the ensuing year was next proceeded with, Messrs. S. M. Robinson and H. C. Phillips acting as tellers. The following was the result of the election:

President, William H. Rhoads; Vice-Presidents, Albert Moore, W. Langenheim, W. H. Whitehead; Secretary, R. J. Chute; Treasurer, John R. Clemons; Executive Committee, James Cremer, Edward L. Wilson, W. L. Shoemaker, John Carbutt, and H. L. Kripps.

Proper responses were made by the officers elect.

Mr. Moore reported, on behalf of the Executive Committee, with respect to a proper room for the Association, its cost, &c.

Mr. Charles Evans exhibited some admirable negatives, and prints from the same, which excited the admiration of all present. Mr. Evans stated that it had been his effort to produce negatives good enough without retouching, and his work proved his great success. He kindly gave his formulæ for producing such negatives, which are published on another page. Mr. Evans was tendered a vote of thanks by the Association.

Mr. Rhoads exhibited a number of prints

showing the working of different papers on solutions of varied strength, which he fully explained. Those silvered on a fifty-five-grain solution were far inferior in brilliancy to those sensitized on a twenty-five-grain solution. Drying the paper by heat quickly was also found to be bad. The papers used were Hovey's and Clemon's, both of which rendered excellent prints on the weaker solution. The prints are very interesting.

Mr. Bell exhibited prints toned by different methods, and also an exquisite series of pictures of a lady, which were greatly praised. A print of a Zouave was also shown, from Mr. Wm. Aitken, Millville, N. J. The stars and stripes, in the form of a tent, was used as a background, and yet the stripes were visible on the legs of the bravado. Why?

The Secretary read a cordial letter from Mr. R. Benecke, Secretary of the St. Louis Society, full of good-will, and agreeing to exchange examples of work, experience, &c., with the sister Society. Several matters of a business nature were then attended to. The subject of dues was discussed, bills passed, and amendments proposed to the Constitution.

A recess was then taken to witness the lantern exhibition. Mr. Bell exhibited a number of views of the Yosemite Valley, from Muybridge's negatives, made by the gum-tannin dry process and magnesium light in contact with the negatives. Mr. Bell communicates his process on another page.

Mr. W. Langenheim exhibited an admirable series of foreign views, statuary, colored groups, &c.

Mr. Marcy was present with *two* sciopticons, thus treating the Association to dissolving views. They were much applauded. After the exhibition the Society adjourned, at 10.50 P.M.

FERROTYPERS' ASSOCIATION OF PHILADELPHIA.

THE regular monthly meeting of the Association was held at Mr. William W. Seeler's gallery, Eighth and Spring Garden,

November 1st, 1870, the President, Mr. A. K. P. Trask, in the chair.

The minutes of the last meeting were adopted as read.

Discussion now took place on skylights, and different theories were advanced. The merits of a north skylight combined with an east or west sidelight was advocated by one member, while others thought a north skylight, with a north sidelight, to be preferable.

One of Mr. Trask's pictures received a majority of the votes.

Adjourned to meet at D. Lothrop's gallery, 43 North Eighth Street, Tuesday evening, December 6th, 1870.

Regular monthly meeting of Ferrotypers' Association at Mr. D. Lothrop's gallery, Tuesday evening, December 6th, 1870, the President, Mr. A. K. P. Trask, in the chair.

The minutes of last meeting were read and adopted.

Mr. George A. Osborne was elected a member of the Association.

The Committee appointed to obtain the prize gold medal presented the same, which was accepted, and the Committee discharged. The Treasurer was instructed to pay the bill.

The Committee on Skylights and Manner of Conducting Business reported through their chairman, Mr. Trask. The report was accepted, and Committee discharged.

The ferrotypes receiving a majority of the votes was made by Mr. Charles McAllister.

The Committee appointed by the chair to examine the reports and award the medal were Messrs. Gilbert and Lothrop. They reported the following decisions: In favor of Mr. Trask, four times; Mr. Lothrop, twice; Mr. Bolles, once; Mr. McAllister, once; and once a tie between Messrs. Trask's and Lothrop's picture.

The medal was awarded to Mr. Trask by Mr. Gilbert, chairman of the Committee.

The members were of the opinion that it was not best to offer a medal for next year, owing to the embarrassing feelings occasioned, thus preventing a free and disinterested discussion on the merits of the different pictures exhibited; but the exhibition

of pictures every month to continue the same as heretofore.

The election of officers for 1871 now took place, with the following result:

Mr. David Lothrop, President; Mr. J. C. Harmon and Mr. C. M. Gilbert, Vice-Presidents; Mr. C. L. Lovejoy, Secretary; Mr. William W. Seeler, Treasurer and Assistant Secretary.

Adjourned to meet at Mr. C. L. Lovejoy's gallery, 500 South Second Street, Tuesday evening, January 3d, 1871.

D. LOTHROP,
Secretary.

Report of the Committee on the Best Manner of Conducting Business.*

It has been customary, in times past, with photographers and ferrotypers, to stay at home professionally and to keep everything a profound secret with reference to their manner of working; and they would feel highly insulted if their neighbor had courage to ask them for any of their formulae.

Such a principle is very injurious to our business, and ought to be condemned by all who take an interest in the advancement of our art, and the prosperity and encouragement of our best artists.

No advancement can be made if every man keeps every new discovery to himself, for when he dies his new discoveries die with him, and we, as artists, receive no benefit from them. Hence our art will actually degenerate.

The true principle, for mutual advancement, is to organize societies where we can have discussions on all important matters connected with our business, and exhibit our work, and for every artist to do all he can to educate himself and his coworkers.

This principle should receive encouragement from all who take an interest in the prosperity of our art, and the development of photography.

The Real Cause of Dull Times, and How to keep up a Demand for our Work.

For example, for many years past we

* Read before the Ferrotypers' Association of Philadelphia, December, 1870.

have made small vignettes, standing figures with scenery backgrounds, and by fences and posing chairs, and pedestals with curtains, and parlor scenes, &c., with all the accessories that could be thought of. Such pictures have had a great run, and we all did well with them, but gradually our business grew less; and we resorted to every means in our power to increase it. Some lowered prices, thinking it would increase trade, but to no purpose.

Now, the real *cause* of the dulness is *this*: Everybody has a supply of the above-named styles of pictures, and it is very plain that you want but one picture of your friend of the same style, and when you have supplied all your friends with your picture of those styles you will have less taken, as you have only new friends to give them to. Consequently our orders will be smaller and farther between, and our business grows gradually less every year. Now, what must be done? Some say, "We have too many engaged in the business." That is not the cause.

We only want something new. The *demand* is for something new, and all our best customers ask if we haven't something new.

They say, "We have had so many pictures taken this old way; we are tired of them; give me *anything*, so it's new."

You all know that has been the cry for at least two years past, and we have only been able to furnish them with what is best known as the large heads, or imitation of the Berlin cards. A few made them at first, and now they are the only style of ferrotype called for in some of the galleries.

They are called, at different galleries, by different names. Some call them "German Head Ferrotypes," others the "Bon ton," and some the "Large Heads," but they were christened by the one that first made them, the "Chromo Ferrotype." His reasons for giving them this name was the fine soft tone, when made on the chocolate-tinted plate. Whether this is the best name or not, we feel that it should be named, and that all should call it by the same name. To make a new picture popular and widely known every artist should call it by the same name.

The way to keep up a demand for our

work is to issue new styles of pictures, the same as milliners and hatters and dress-makers and tailors issue *their* new styles.

How shall New Styles be Introduced?

The Ferrotypers' Association is the proper medium through which the ferrotypers can regularly do it, and name all new styles of pictures. To do this successfully you must receive the encouragement of all the ferrotypers throughout the country.

In conclusion, your committee recommend for your consideration the propriety of this Association extending an invitation to all the ferrotypers in the United States to become members, and contribute pictures with their formulæ to our exhibitions, the formulæ to be published in the photographic journals, and made known to all.

This plan, properly carried out, would unite the whole talent of our country, *and there would be no such thing as fail.*

The object of this Association is to unite all engaged in and associated with our business, to devise means for the advancement of our art, to encourage a better class of work, which will inevitably lead to better prices; and may we see them promoted.

A. K. P. TRASK,
D. LOTHROP,
Committee.

PHOTOGRAPHIC DIALOGUES.

(SEQUEL TO "ONE HUNDRED DAYS IN A FOG.")

BY ELBERT ANDERSON,

Operator Kurtz's Gallery, 872 Broadway.

Marshall. Hullo! old boy, how you was? Happy New Year, and all the complaints of the season to you.

Anderson. Thank you; same to you. You are just in time; take a glass of wine. Going to make *calls*, I see.

M. Well, I was going to, and that's a fact. But just look at my hands, they are as black as the pots (to say nothing at all of the kettles); and if I am asked at any time to take my gloves off, it would be rather—hem! well, you know how it is yourself. How you manage to keep your hands so

clean, is a peg beyond me. I noticed your hands last evening particularly; they were as black as if you had a pair of black kid gloves on, and now they are as clean as a whistle. What do you use? I *try* to clean mine by first rubbing them with a rag dipped in a solution of iodine, and next rub them over with a piece of cyanide, and here's the result; they look as black as soot.

A. Reverse the operation, Mr. Marshall, and you will have no difficulty whatever. Rub the stains over with a piece of cyanide of potassium under the tap; then rub the cyanide over the whole hands; next pour in the hands half an ounce of a strong solution of iodine in alcohol; rub the hands well together, when you will perceive a slight *lather*, plunge them under the tap, and wash until all "greasy feel" has vanished; finally, with soap and water, and *here's* the result.

M. They couldn't be cleaner. I'll try it. Just look at that. It sticks to me like grim death to a gentleman of Ethiopian extraction.

A. That! why that's pyro, man. The best way to get that off is (if you will allow me to make a bull) not to get it on. The silver stains are removed with ease, but with pyro it is a very difficult matter. Use one of those suction-holders for developing. Pyro can be removed by rubbing the stain first with a solution composed of one ounce bichromate potash, dissolved in muriatic acid, diluted with eight parts of water. When the pyro stains are gone, the bichromate leaves a yellow stain, which must be immediately removed by washing with strong ammonia. But all this is very disagreeable and troublesome; better than all these, don't strengthen at all; redevelop with iron; *apropos*, why do you "strengthen," or rather what is the effect of "strengthening," as you call it?

M. Why it makes the negative *stronger* or more intense when it's too thin, don't it?

A. No, and yes. It makes *certain* negatives only stronger.

M. I thought it made all negatives stronger.

A. No, Marshall, you are wrong, though it is very natural for you to think so. It does not strengthen *all* negatives, as its

name implies. Certain negatives undoubtedly require it, but in *portrait photography* most of these thin and beautiful negatives are totally ruined by any attempt to strengthen them. There is a certain class of photographers who strengthen every negative they make; and if you ask them why, they look down, and confused, and say because—well because they *always* do it. A capital reason (!), though somewhat unsatisfactory.

M. Will you please enlighten me on this subject?

A. In copying engravings, wood-cuts, cards, printed matter, &c., &c., in fact any matter that is simply black and white, in order to make the contrast brilliant, it is essential that the white of the paper be kept clear, and the negative must, in consequence, be very intense, *i. e.*, opaque; a first strengthening with pyro before fixing, and a second application of mercury afterwards, may, therefore, become imperative. Now tell me exactly what takes place when we strengthen a negative?

M. Yes, it makes an additional deposit of silver all over the negative, thus rendering it more intense.

A. Now you see that if you think so, it is perfectly natural for you to strengthen a weak negative; but the fact of it is that it does nothing of the sort.

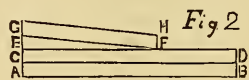
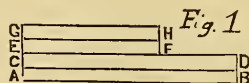
M. Well, then, I might just as well hang up the fiddle and the bow. Please tell me what it *does* do.

A. I will; by the aid of some diagrams which almost explain themselves. Let A B, Fig. 1, represent your glass; C D, the coating of iodized and sensitized collodion, and you are about to copy an engraving, printed matter, or anything that is simply black and white. You have now poured on your developer, which has deposited only on the lights, *i. e.*, what will represent the *white* of the paper in the proof, and is seen at E F, whilst that part representing the blacks of the printed matter will receive no deposit, and is represented by the clear space between F and D.

M. Just so.

A. Now, as most probably will be the case, the deposit of silver, E F, will not be sufficiently opaque to entirely obstruct the

light during printing; and in order to remedy this, we strengthen it by an additional deposit, G H.



M. Well, that's exactly what I said, but you said it did nothing of the sort.

A. Gently, gently; you said it made an additional deposit of silver *all over* the negative, whereas this deposit has taken place only on the lights, *proportional to the first deposit*, and thereby hangs a tale.

M. Please put a head on it.

A. Now listen to me. In the first instance, as the negative represents only black and white, the deposit is equal in thickness on all the lights.

M. Surely.

A. Consequently the additional deposit is also equal in thickness. So far, so good. But with a portrait negative the case is wholly different.

M. How so?

A. Let A B, Fig. 2, represent the glass; C D the collodion film, but, in this case, the deposit of silver is represented at E F, *not* as a flat surface of uniform thickness, but with an infinite gradation of light and shade, the highest lights being represented at E, gradually tapering down to F, and the perfect shadows by F D or the clear film. Now what is the effect of the strengthening?

M. Why an additional deposit, represented at G H.

A. And that's just where you are wrong. The additional deposit, as I said before, is only in proportion to the *first* deposit, and can be at once understood by a glance at Fig. 3, showing the additional deposit follows the principle of the first, and tapers away to the clear film, where, as you say, no de-

posit takes place. Now, then, when you have a good negative, with the *proper contrast* of light and shade, let it be as thin as gauze. Any attempt to strengthen it tends at once to destroy the proper balance between the lights and shades, and the nature of the negative is changed, or, in plain terms, ruined. But if you have a negative that is flat and thin, and in which the contrasts are insufficient, strengthen *that* negative and you will increase the brilliancy; but better still, don't make that kind of negative. And now for one of my standard rules: "*All the chemicals and skill in the world will fail to produce a really good negative, if the subject is not properly lighted in the first place.*"

M. Well, I'll drink to that, anyhow. What's the biz before the meeting?

A. I believe it is usual at schools, when the *term* expires, to have a general review, and I propose—

M. Hold up a minute. Let me suggest something; I've an idea.

A. Have you, indeed; I advise you to hold fast to it, in case—you—know—. You were about to suggest—

M. That it would be a capital plan to take up the "One Hundred Days in a Fog," and argue the contradictory points; that is, give me *your* opinion on the subject. How's that for high?

A. Agreed. I'll think over it.

(To be continued.)

GERMAN CORRESPONDENCE.

Dry Plates in the German Polar Expedition—Washed Sensitive Paper—Simple Fuming Process—American Pictures in Berlin—Eclipse Expedition.

IN the midst of the confusion of war a scientific expedition, which has lately returned to us from the polar regions of the North, attracts attention; it is the German Polar Expedition, which started about one year ago. It consisted of two vessels; one of them, the *Hanna*, was wrecked, and its crew spent six months on a floating ice-field. The field floated southward, and the crew saved themselves, after great struggles and privations, reaching Julienhaal in Greenland. This expedition was provided with a

couple of hundred dry plates, prepared by Mr. Harnecker here. Harnecker's process is very simple; he merely adds a little rosin to the collodion, coats with it the plates, and after sensitizing them, he washes and dries them. That is all. A lot of such plates, and a camera, provided with a Steinheil lens, was all the apparatus which the expedition carried. Two members of the expedition, Drs. Bergen and Copeland, devoted two hours, previous to their departure, to get some kind of an idea of photography, to learn how to place the camera and how to focus. But the most ticklish point, how to time the exposure, could, of course, not be taught them. The plates have now been returned, after an absence of one and a quarter years; eighty of them had been exposed, and Harnecker developed them. It is strange that, under all these circumstances, the result is satisfactory. The pictures will serve as excellent guides for a draughtsman, and give a truer insight into the character of Arctic scenery than the sketches of a painter. These pictures can, of course, not be compared with the splendid Greenland views, which Mr. Black, of Boston, showed with the magic lantern at Cleveland, and which I should like to exhibit to our Photographic Society; but they are interesting as the result of an experiment with dry plates under difficult circumstances, and as a triumph for photography as an aid to science.

Our scientific men in Germany still keep rather aloof from photography, but such results as I have mentioned above are apt to break the ice.

The want of photographic skill is a great drawback. We have to make it as easy as possible for these scientific gentlemen, or else they will not touch it, and are afraid of soiling their fingers with silver stains.

In this respect the manufacture of permanent dry plates, and of sensitive paper which will keep, is of the greatest importance. The latter problem has, I suppose, been successfully solved by the silvered and washed paper of Hanck and Baden, and, as our friend Simpson writes to you, the process has in England been applied to various purposes.

I use these washed papers also when, in dull winter weather, I have silvered more

paper than I can use at once. Instead of running the risk of having it spoiled, I throw the paper in water, and after it has passed through two or three changes for about five minutes, I dry it, and it will keep for weeks, provided the positive bath was perfectly neutral. The paper becomes sensitive as soon as it is fumed with ammonia; without ammonia the prints are very weak.

The fuming with ammonia is certainly a very simple operation, still it requires some preparation and apparatus; a fuming box or a closet is necessary, and also time. I have considered the matter over, and tried to find a way to dispense with the fuming altogether (I refer to washed papers), and I have succeeded in a very simple manner.

I place behind the sensitive paper, in the printing-frame, a piece of felt or cloth which has been on the outside, covered and rubbed over with carbonate of ammonia. In order to prevent powdered particles of the salt from coming in contact with the paper, the latter is first covered with a piece of blotting-paper; next comes the felt or cloth with the ammonia side furthest removed from the negative, on the top of this the printing-pad, and finally the frame is closed by the cover. The fuming process takes place in the printing-frame, and the printing goes on very rapidly.

This method is more convenient than that formerly recommended, *i. e.*, fuming of the printing-pads. It is easily controlled, as we can at any time examine, if enough carbonate of ammonia is left on the felt, or cloth, or not; but it is particularly convenient to amateurs, who wish to work with as little apparatus as possible. I and my scholars use this process for direct copying of drawings.

A piece of permanent silvered paper, a flat board, and a piece of glass, a few American clothes-pins, and a piece of felt, with a little carbonate of ammonia, is all that is required. I took recently the few articles mentioned, in a portfolio, to the University, and copied from a scientific work a plate by placing it in front of the window.

The print was clamped to the sensitive paper, and exposed to the light, and while

I occupied my time with reading and writing, I got an exact copy of the plate, a negative of course, in a similar manner to the one by which Mr. Walker, in Washington, obtains his negatives. As soon as the ammonia is evaporated the paper keeps tolerably well; if it is to be preserved for a longer time it should be fixed in hyposulphate of soda, and washed.

That only albumen paper can be used for this purpose is a matter of course.

Our negative process is not near as easy as the above-described positive process, which any one can practice; particularly the dry-plate process offers great difficulties. This subject has been much discussed here of late, after I had shown the beautiful views of the Wissahickon Valley, made by Carey Lea, with the collodio-bromide process and also the splendid pictures by Mr. Alex. Henderson in Montreal.

They were much admired, and it was generally admitted that the American photographers are ahead of us in the dry-plate process.

Space does not permit me to give in full the favorable criticism which was bestowed on the pictures which I brought with me from America. Please read the report of the meeting of our Society for further particulars.

Every opinion expressed did not only indicate respect, but admiration for the American artistic productions in the realm of photography, and I feel happy to be the interpreter. My American voyage was the happiest period of my life, and my longing for "the land of the free and the home of the brave" is still the same.

I would like to say "good-bye" now, but I just remember that a new scientific expedition has been started. In Sicily and Gibraltar a total eclipse of the sun will be visible on the 23d of December. It seemed almost as if the interesting phenomena would have passed by unnoticed if it had not been for the Americans.

Germany and France at war, "*inter arma silent leges et scientiæ*," a scientific expedition was out of the question; England refused the pecuniary assistance, when all at once the American expedition made its appearance in England. They invited the

Englishmen, and this gave a new impulse to the matter. England moved, of course at the eleventh hour, but still it moved; and if luck favors me, I shall accompany the English expedition to Sicily. I may celebrate my Christmas on the smoking Ætna, and write my next correspondence near the roaring waves of Seylla and Charibdis.

In the meantime, however, I wish all my friends in America a merry Christmas and a very happy New Year, and for my own country I will say, with your President Grant, "Let us have peace."

Yours,

DR. H. VOGEL.

NOTES IN AND OUT OF THE STUDIO.

BY G. WHARTON SIMPSON, M.A., F.S.A.

The English Exhibition—M. Adam-Salomon's System of Lighting and Alcove Background.

The English Exhibition.—Our exhibition has just closed, after continuing open with uninterrupted success for rather more than three weeks. We have never before had such a magnificent display of photographs. In numbers, in technical excellence, and in art excellence it has far exceeded all previous exhibitions. I mention facts like this because they are inevitably encouraging to photographers everywhere. It is satisfactory to have the definite practical evidence that there is no kind of decadence, nothing of stagnation in our art. The especial feature of the exhibition was its great art excellence: a higher standard seemed by common consent to have been aimed at and secured. As in the two or three recent exhibitions the influence of the work of M. Adam-Salomon was very manifest in the portraiture. On the opening night that gentleman was present, and by no means niggard of his praise. I must mention here a graceful compliment he paid to Mr. Valentine Blanchard, whose portraiture bore away the palm beyond question. In answer to some appreciative remarks on these pictures, Mr. Blanchard observed to M. Salomon: "I consider you, Monsieur, my master in this branch of the art."

"Ah, well!" replied M. Salomon, "you are Raphael, and I Perugino."

Besides the influence of M. Adam-Salomon in portraiture, there has been another influence at work: the issue of Mr. Robinson's lessons on *Pictorial Effect in Photography* have doubtless done very much, not simply in elevating the taste of photographers, but in instructing them in art principles, giving them a desire for better work, and at the same time teaching them how to secure it. I have been delighted to learn that these lessons are so highly appreciated by our American friends, as I feel assured that their advancement in art qualities must follow.

I am glad to inform you that several examples of American photography were exhibited, and were highly appreciated. The case you kindly sent arrived too late, unfortunately, for the opening of the exhibition, but Mr. Spiller, the Secretary, and myself were enabled to place many of the examples where they were much admired.

The examples of photo-mechanical printing exhibited were unusually fine. Albert's process, and Edwards's photo-colographic process, which he has styled heliotypy, were represented by very fine examples. But Woodbury's process astonished every one by the multitude, variety, and excellence of the examples shown. The mention of this process reminds me of a rumor I saw mentioned in American pages, to the effect that the collapse in this country of Disderi & Co. was due, in some way, to an attempt to work the Woodbury process. The passage I refer to, after referring to the sale of the establishment in question for £700, runs thus: "The reasons for the collapse of this old, and, at one time, highly prosperous house, are not certainly known to us, but our impression is that they lost very heavily in trying to introduce, commercially, the Woodbury-type process in England." It is only fair to explain that this paragraph contains much misapprehension. Disderi & Co.'s house was, in this country, neither old nor highly prosperous. A company, on the limited liability principle, under the name of Disderi & Co. (limited), was established a few years ago, in this country. A very magnificent studio and photographic establishment were opened at immense cost; but the affair was not a success. Some time

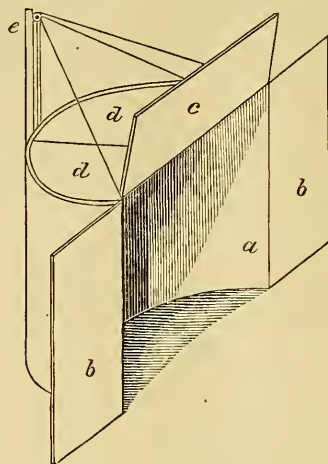
afterward the Woodbury patent was purchased, and an unnecessarily costly and large establishment taken to work it; but before the thing was fairly launched, and before the greater part of the bills of exchange paid for the patent came due, the affair had collapsed. As comparatively little of the responsibility incurred in the Woodbury business was, I understand, paid, it could scarcely have caused the collapse of the new venture. The Disderi establishment, in Paris, was old and prosperous, but I believe it was not connected with the London business. My sole object in referring to this rumor is this: all new undertakings, especially involving new scientific principles, have enough to fight against in the usual order of things, and I should be sorry that American enterprise in photo-mechanical printing, or other photographic novelties, should be damped by unfounded depressing rumors.

M. Adam Salomon's System of Lighting and Alcove Background.—I recently mentioned that M. Adam Salomon had, for two years past, been working a system of lighting, by which he is enabled to dispense entirely with blinds in his studio. M. Salomon was good enough to construct for me a complete working model, and to furnish me with the fullest details of its working, which fully demonstrates the efficiency of the system.

Perhaps I shall best make the character of the combination clear if, before proceeding with further description, I subjoin a diagram showing the general form.

From the above rough sketch of the elevation, you will be able to form some idea of the general form. It consists of a curved background, *a*, about eight feet high and ten feet wide at the curve; that is, the diameter of the circle of which the curve of the background forms half is ten feet, and the radius, of course, five feet. Hinged to each side of the background are movable wings, *b*, about four feet wide, and a canopy, *c*, of a similar character and width is hinged to the top in front. Behind this projecting front canopy is a covering or canopy to the curved part of the background; this consists of two halves, *d* and *d*, hinged in the centre. Attached to the background at the

back is a rod, *e*, terminating in a series of loops or pulleys. Through these pass cords which are attached to the canopies *c* and *d*. The cords are all brought to a position be-



hind or at the side of the background, where the operator can readily manipulate them, each cord having a counterpoise attached, so as to maintain the canopy in any position into which it is pulled by the manipulator. The wings and canopy *b* and *c* are light frames covered with thin, transparent white muslin, transmitting some light, but arresting or breaking up direct rays of sunlight. At each end of the canopy *c* is attached a piece of thin muslin, which we have not figured, as it would have somewhat confused the diagram. It is the same width as the wings, over the top of each of which a piece hangs, to maintain the continuity between the wing-screens and the projecting canopy. The canopies *d* are also light frames covered with thick white calico, transmitting very little light. The background rests on three feet, one at each side and one in the middle; these each project behind about eight inches, to give firmness and steadiness; each foot has a large castor, to permit the whole to be wheeled round easily into any position. The wings are hinged so as to hang an inch or two from the ground, so as to be easily moved backwards and forwards. The background is papered, in that used by M. Adam Salomon, with salmon-colored printing-paper, which

is found to answer well. Gray or brown, or other neutral color, would, of course, answer. The size and proportions might also be modified to suit circumstances, but I am describing the proportions and character of that which has been found satisfactory, by the designer, in actual use, and which, probably, will be found to answer best in the studios of most professional portraitists.

From the diagram it will be seen that we have here a kind of alcove or niche, eight feet high, and about nine feet from back to front. It is open in front, but capable of being nearly closed, a soft light, however, being admitted through the wings and front canopy. To illustrate its working, I will suppose it to be placed in an ordinary oblong studio, with glass roof and both sides, the ends merely being opaque. The sitter is placed in the centre of the circle of which the background curve forms half, just under the hinged part of the front canopy, which I will presume is down, and the wings just so much closed as to form a rectangular opening to the alcove. He is now sheltered from any direct illumination, a soft, diffused light surrounding the figure. A slight elevation of the canopy *c* at once admits a portion of direct top-light, the amount and effect of which can be regulated accurately without the operator needing to stir from the spot at which he watches the effect of light and shade on his model. In like manner the proportion of direct side-light, at either side, is modified in any desired degree by the opening or closing of the wings *b b*. Still more than this can be done in shutting off volumes of direct light from the model, who, in all cases, remains quite stationary, retaining the desirable position first given to him. Where the flood of light reaching the sitter is great, and the mere use of the wings is insufficient to control it, then the whole framework is made to move round the sitter as a centre, which, running on the large castors to which I have referred, is easily effected, and the sitter is entirely screened from the light on one side or the other, as may be desired. If direct light be shining on the sitter, it can be quite cut off in this way; or it can be utilized by interposing one of the side wings, which, being

covered with thin muslin, will filter, as it were, and distribute the light, without quite intercepting it. It will be seen, on a little examination, that almost any amount of light, the most limited and the most voluminous, can be allowed to reach the sitter, and almost any part of him, the means of controlling its direction and impact on the sitter being the most simple and easily managed.

The sitter being placed in position, and lighted, it will be seen that the light on the niche-like background will necessarily give some degree of gradation of light and shade, which will give the figure relief, and indicate space around it. But there is another considerable power to be used for the purpose, to which we have not yet referred. The canopy *d d* is, as we have said, hinged in the middle, and opens from the outside. If both sides were open, the background would be perfectly illuminated from the top, and the effect of light and shade obtained from the front would be very much neutralized. If both sides were closed, as represented in the figure, the background would be dark, but with a broad effect of light and shade, produced by the dominant light in advance of it. But if special effects of light and shade are desired on the background, the amount of light, and its direction, falling upon the background, can be governed without in any degree interfering with the lighting of the figure. Either side of the canopy *d d* can be opened to admit just such portion of light as may be found best to secure relief to the figure and complete the balance of light and shade in the picture.

In his own practice M. Salomon does not commonly take full-length figures; but still it is necessary occasionally. In such case, the termination of perspective lines, as will readily be seen, especially if the carpet have a definite pattern, would appear displeasing, giving a curved line across the plate. To remove this unsatisfactory effect, a movable dado may be employed, which is placed behind the sitter within the curve of the background. This answers satisfactorily. It need not be high, or represent anything more pronounced than an ordinary skirting-board.

The construction of this alcove back-

ground, with its light-controlling arrangements, need not be difficult or expensive. That which M. Adam Salomon has had in satisfactory use cost a sum equivalent to about three pounds sterling. The amount may be more or less, I apprehend, depending much upon the mode of going about the work; but if made in the most complete and costly manner, it must be, in many cases, an absolute economy, when it is considered what may be saved in the construction, arrangement, and management of the studio. The glass-room may be of the simplest construction. It is only necessary that it should admit plenty of light, and protect from weather. The alcove described practically consists of a small studio in itself, with the fullest facility for controlling the lighting. M. Adam Salomon prefers that, even with such an arrangement, the skylight should be of ground or stippled glass; but for the rest it is only necessary to have plenty of light at both sides, through clear glass, and from almost any aspect, its amount and direction being so thoroughly under control. The advantages of the arrangement will, I apprehend, be tolerably clear to most readers, and if any doubt existed, the complete satisfaction of such a master of lighting as M. Adam Salomon, would be sufficient authority for the practical value of the system.

The working model with which M. Salomon was good enough to furnish me, was chiefly constructed of strong card-board, but I ascertained from him a few particulars of the mode of constructing his own in Paris. The formation of the curved background itself is the chief consideration. M. Salomon's consists, first, of two curved pieces of wood to form the framework. These are placed, one for the bottom and one for the top, at the proper distance apart, and a series of thin narrow planks, not more than three or four inches wide, are fastened to the curved pieces of wood, the planks being fastened to each other by means of a groove and tongue. When complete, the little angles or irregularities in the curve are taken off with a plane. Probably, if well made laths, something like those used in Venetian blinds, were employed, a more perfect and regular curve might be more easily

obtained. In such case, the general framework would probably require to be made a little more firm or rigid. M. Adam Salomon found it desirable to increase the rigidity, seeing that the arrangement is often wheeled rapidly about, by means of a binding of iron running round the top and bottom of the curve. The background may, of course, be painted, or sanded, or treated in any manner to suit the taste. M. Salomon finds simple papering with printing-paper answers every purpose, a piece of salmon-colored paper neatly lining the curved screen yielding every effect in the finished picture, from the highest gray to the deepest, depending upon the amount of light suffered to reach the inner portion of the niche.

It is somewhat difficult, by mere description, to convey a clear idea of the construction and working of a combination like the one in question; but I hope I have succeeded in giving your readers a fair idea of the thing, as my own conviction of its great value has made me anxious that it should be fully understood and appreciated.

Printing Transparencies with the Magnesium Light

ON GUM TANNIN DRY PLATES, IN CONTACT WITH NEGATIVES.

BY WILLIAM BELL.

COLLODION.

ANY old and thin collodion will answer. Silver bath, forty grains, acidified with nitric acid.

PRESERVATIVE SOLUTION.

Gum Arabic,	20 grains.
Rock Candy,	5 "
Tannin,	10 "
Water,	1 ounce.

DEVELOPER.

Pyrogallie Acid,	3 grains.
Citric Acid,	1½ "
Water,	1 ounce.
Gelatine solution,	5 drops.

SILVER AND CITRIC ACID SOLUTION.

Nitrate of Silver,	10 grains.
Citric Acid,	5 "

Coat an albumenized glass with the collodion, sensitize it in the bath until all oil-

ness disappears, then put it in a dish of water film uppermost. Move the dish about until the water flows smoothly over the plate, then take it out and wash it under a stream of water while another plate is being coated and sensitized; now take the washed plate and flow over it the filtered preservative solution. Flow it back and forth well on the plate, drain, flow over it once more the preservative solution, drain, and set it up on nails (driven in the wall) to dry. The collodion side should be outward, the lower portion of the plate touching the wall, the upper inclining outward at an angle of 45°. Stains and defects occur when this is not properly attended to. Dry without heat, spontaneously. Print in a common pressure-frame the negative and dry plate in contact by the magnesium light (Proctor's Copying Machine). One inch of single magnesium ribbon is used for each. I also exposed some in diffused light, in my skylight, 5 seconds, and I think they are equally good.

Now take the exposed plate, wet it well with water, and drain it, then pour over the plate one ounce of the pyro solution, return the solution to the developer glass, and add five to ten drops of the silver and citric acid solution to it. Mix well, flow it over the plate, keeping the plate in motion the whole time development is proceeding. When developed, fix in hyposulphate of soda, wash well, and dry without heat. When dry, wet the plate with water, and flow over it an acid solution of chloride of gold, one grain to four ounces of water. When toned, dip the plate once more in hypo for a minute, wash well again, dry, and the transparencies are ready for mounting. Difficulties to be met with are blisters, especially when the collodion is not very thin, and washing off of the film during development, fixing and washing. The gold is not to be neutralized. The magnesium light is convenient, because it may be used at night, or when daylight is dim.

THE first number of the *Photographic World* will be ready January 15th. Are you a subscriber?

PERFECT NEGATIVES WITHOUT RETOUCHING.*

BY CHARLES EVANS.

I GIVE the following formula which, in my hands, produces negatives that need little or no retouching:

Plain Collodion, . . .	8 ounces.
Iodide of Ammonium, . . .	32 grains.
Iodide of Sodium, . . .	8 "
Bromide of Potassium, . . .	8 "
Bromide of Cadmium, . . .	16 "

Neutral Bath, forty grains to the ounce.

DEVELOPER.

Water, . . .	64 ounces.	} Stock Solution.
Sulph. Iron, . . .	3 "	
Epsom Salts, . . .	2 "	

Acetic Acid, about one-half ounce to twelve ounces of stock solution.

OUR NEW ENTERPRISE.

WE feel very much encouraged by the flattering manner in which our proposition to give our readers another magazine has been received, for subscriptions to the *World* are almost as numerous as the renewals for the *Photographer*. The majority say, "Go on; make it as good as the *Photographer*, and we will stand by you." Thanks, good friends. Our first number of the *World* will only be fifteen days behind this, when you will have the opportunity of judging whether or not it is worthy. You have no idea what a pressure of good, valuable information—the thoughts of our co-workers in all parts of the world—we have kept from you, merely because the pages of our magazine would not contain it. "That was criminal on your part," you may say. So it was, and we confess to having felt guilty about it a long time. We are unable to withstand the pressure any longer, and we hope to sin no more in this direction. With the *Photographer* and the *World* in your possession, we guarantee that hereafter you will be kept posted on all that goes on of interest to you, no matter in what part of the world it is first made known. The one will contain nothing that is in the other. One shall not be weakened to strengthen the other,

* Read at the Pennsylvania Photographic Association, December 12, 1871.

but *both* magazines shall be live, fresh, and up to the times. Both will *work* for the interests of the *practical photographer*, for whom everything else and every other cause shall bend.

Thank you for your already expressed confidence in our promises, old subscribers. On your faith in our desires to be of use to you, and on your patronage, our strength depends. Give us your words of good cheer if you feel like it. They bear us up. Please, also let your neighbor know of our existence, and if you cannot induce him to subscribe, and thus secure for yourself some of our premiums, at least let him know there are such magazines as ours. We will gladly send circulars to any who will aid us in this work.

If you cannot undertake to distribute them, please then supply us with the names of *all* the photographers you know of anywhere, and we will attend to them.

Our *World* shall revolve its brightest and best side always toward you, and our *Photographer* shall labor only for your best good. Look for the *World* January 15th.

OUR PICTURE.

THE photograph accompanying this number is the one which secured the gold medal offered by us last year for the best *composition* picture, and is No. 23 on the list published in our last number. It is from negatives made by Messrs. Robinson & Cherrill, Tunbridge Wells, England, and the subject is called "Returning from the Well."

Messrs. Robinson & Cherrill do a large business in this class of work, and endeavor in their practice to make *pictures* as well as photographic portraits. This is a line of work which we should very much like to see our readers take up, and endeavor to popularize. The studies of "Gems of German Life," presented in our October number, and this picture, will give them some very good ideas in this direction sufficient to begin. In the present subject we have not only a good likeness of the lady, but we have a charming *picture* of her. If this be studied it will be seen that it is posed with the utmost care; the drapery is studiously arranged,

and the lighting in accordance with excellent taste, all harmonizing with the subject—a most admirable one, by the way. This picture is a strong rival of one by the same artists—No. 24 on the prize list—of the same person, called, "Free from Care." In the latter the artist has caught a smile upon the face of the subject, which is a photographic triumph.

When about to make such work, first conceive carefully in your mind the *picture* you would produce, and then mould the subject and the accessories harmoniously together to produce it.

In choosing the "picture," have regard to the subject. An antiquated maiden must not be posed or composed like "Returning from the Well," or like "Free from Care." Neither will it look well to pose a pretty, graceful girl to represent "Anxiety," or "Unrequited Love." Have care in this respect, and see what you can do.

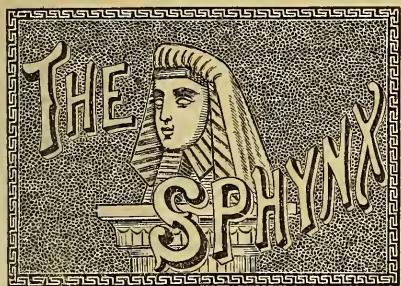
The medal awarded Mr. Robinson for this picture, was the *twenty-fifth* which had been given him for his excellent work, but this is the *first gold one*, and the *first from America*.

Mr. Robinson is the author of "Pictorial Effect in Photography," which is an excellent guide to success in producing just such work as the present picture. Many of our readers already have his work, and assure us that it is invaluable.

The prints were made by Messrs. Sudards & Fennemore, Philadelphia, on Trapp & Munch's albumen paper, by ordinary formula, 25-grain solution. This paper is unsurpassed, as the prints testify.

THE SOLAR CAMERA PATENT.

MR. D. A. WOODWARD's patent for a solar camera expires Feb. 24th. Application has been made for an extension of the patent. Opposition to the extension will be formally and actively made and the interests of photographers looked after carefully by parties interested in the manufacture of solar cameras. It will be the duty of every one who has a solar camera to assist them, and a call will probably be made by them in our next number.



CONTRIBUTORS to Sphynx will please write on one side of the paper only.

ANSWERS.

Answer to Queries 3 and 4, in Oct. No.

I do not believe that collodion will "work flat," or "give depth or roundness." The lens being good, these are the results of manipulation. Flatness is produced by bad lighting, over-exposure, or over-development, or all three combined. The subject is too evenly lighted; the background and space intervening between it and the sitter all illuminated alike, too long exposure, and developed until all the delicate half tones, which give roundness and relief, are lost. About the last thing in our art that a man learns, is the exact exposure, and when to stop development.

Old and insensitive collodions are much improved by mixing with new collodion salted with cadmium.

My experience is, that cadmium salts ripens slowly, keeps a long time, and always tends to give a weak, thin negative, full of detail, while potassium and ammonium salts ripen quickly, keep only a few weeks, and tend to yield strong, vigorous negatives, with full intensity and harsh contrasts. By mixing the two collodions they are both improved in every respect. Try it.—H. B. H.

Answers to December Queries.

1. GREEN LIGHT FOR DARK-ROOM.—Glass coated with spirit varnish, or plain collodion, containing aniline green, dissolved therein, will do. The best thing, however, is green calico, or green glazed muslin rendered translucent by varnish, composed of alcohol and Canada balsam, in propor-

tions to produce the effect. The tint of calico should be a yellowish green.—M. M. G.

2. "BOONE" should be guided by circumstances. If the white building is where at any time of day it reflects the sunlight into his studio, and causes him trouble to get proper light on his subject, double "catch-lights" on the eyes, &c., he will find that it will not only be necessary to blue-frost his glass, but to have curtains also, two sets, *i. e.*, a transparent set for cloudy days, and a semi-opaque set for very bright days.—LIVINGSTONE.

3. "How" will do well to read the "Inside" article in *Mosaics* for 1871. It will assuredly give him the "inside track" of almost everything good. "Iodized solution" is collodion, so to speak, *minus* the cotton or papyroxyline. I use the latter. Then when you add the cotton, you have collodion in proper working condition.—Now.

4. See Prof. Towler's article on this subject in present number, page 11.—ED. P. P.

TO "ONE IN A FOG."—For porcelain collodion, take

Alcohol,	4 oz.
Ether,	4 oz.
Gun-cotton,	6 grs. to oz. 48 grs.
Nitrate Silver,	6 " " "
Chloride of Lithium,	1½ " " 10 grs.
Citric Acid,	1½ " " "

Great care should be used in mixing, which should be done as follows: Take two clean bottles (10 or 12 oz bottles), put your alcohol in one, ether in the other; put your silver in clean water; pour in a little alcohol (out of the alcohol you intend using for your collodion), and grind; then pour the surplus off into your ether, and pour more of your alcohol in the mortar, and grind again, and continue doing so until you have dissolved all your silver, and leave about an ounce of alcohol in your bottle, which you should dissolve your acid and lithium in. Next (in a dark-room) take your bottle of acid and lithium, and pour a few drops in your ether and alcohol, and shake *well*, and continue doing so until you have them completely added; then dissolve your cotton in the mixture, shake well, and (not filter) but let settle.

I have tried this formula, and find it works fine; and if it is used in clear weather, I know will please the "*gentleman in a fog*."—YAGER.

QUERIES.

1. What is the best way to dissolve bromide of potassium for collodion?—BRIDGE-PORT.

2. How can I make gum copal dissolve in benzole? Prof. Towler recommends it in the "*Sunbeam*," but I can't make it go.—BOTHERED.

3. What is the best formula for a good ambrotype varnish that I can dry by artificial heat?—BOTHERED.

4. What is the cause of specks on my prints? What makes them, and how will I get rid of them?—FILLMORE.

5. I mixed up a lot of collodion, which after standing a few minutes turned the most beautiful orange color. At a month old it is nearly clear, and don't work well. "How's that?"—FILLMORE.

6. I have been troubled with that white coating (mentioned in the *Photographer* by some brother), over the picture, which will partly brush off when dry. Some good brother answered it by guessing it was *fog*! He could tell better if he was troubled with

it, I think. Let some other one give a guess at it.—FILLMORE.

7. When we have plates come out unevenly under the developer, that is, a black spot where it is poured on, and curved streaks around the edges on the balance of the plates, the developer not strong, and having acid, say $1\frac{1}{4}$ to 1 ounce iron, what is wanting, more acid or some alcohol?—NEW'UN.

8. I have some of the "*Gems of German Life*." In studying them I find that the *right hand picture* of each is *larger* than its opposite. Thus, a standing figure is *almost one-eighth of an inch taller in one than the other*. Why can they be seen with such a perfect stereoscopic effect when there is such a difference? Are they better for being thus, and why?—DOOR.

9. Do you take a stereo view of a *near* object (say a half or one-third length portrait), with the lenses the same distance apart as for a distant landscape?—DOOR.

10. Must the two stereo prints be mounted exactly the same distance apart as the lenses were when taken?—DOOR.

11. What is the rule for cutting and mounting stereo prints?—DOOR.

12. Please give me formula for taking pictures of children quickly, instantaneously.—ONE BEHIND TIME.

Editor's Table.

PARTIES remitting for subscription should send post-office order or draft, and avoid sending money. Where this cannot be done we will receive 2, 3 or 10 cent *postage* stamps. We cannot use revenue stamps, or take the risk of the mail.

See blank order herein.

THE *Photographic World*, for January, will contain, among other valuable matters, the first of a series of articles on the Magic Lantern, by Prof. Henry Morton, Ph. D., to be profusely illustrated; the first of a series of illustrated papers on Skylights, and their construction, good and bad; articles by practical men in America,

England, Germany, France, Holland, Italy, &c.; and sundry new and novel things. The *World* will be gotten up in beautiful style, and no pains or expense will be spared in making it useful to, and worthy of, the art to which it is to be devoted.

THE *Photographic World* will be found an advantageous medium for advertising. The edition of the first issue will be 5000, and only our usual rates charged for advertising. Dealers, chemists, manufacturers, &c., will do well to send in their copy at once.

The *picture* in the January *World* will be an excellent one of George W. Childs, Esq., the

well-known publisher of many standard books, and proprietor and publisher of the *Philadelphia Public Ledger*, the daily paper having the largest circulation in the United States. The negative was made with a Ross cabinet lens, by Mr. George H. Fennemore, and the prints are being made by the Woodbury process, at the new works in Philadelphia, Mr. John Carbutt, Superintendent. No more fitting picture could we select to accompany the advent of a new magazine than the portrait of this distinguished gentleman. It is a picture, too, worthy of study.

TO CORRESPONDENTS.—When asking questions, hereafter, please state whether you desire to be answered in the *Photographer* or the *World*. As our time will now be most fully taken up by both journals, we ask that your cases be stated briefly, and that you do not expect answers by post, unless it is imperatively necessary. We prefer to answer in this column, but we are always willing to answer our correspondents by letter, if there is urgent need of it. A stamp should always accompany queries to be answered by mail.

MR. ROMAIN TALBOT, our old friend on whom we depended for years for our commissions in Paris, and who was driven from that unfortunate city by the authorities on account of being a German, has established himself at No. 2 Schiffbauer-Damm, Berlin, Prussia, in the photographic stock and commission business, where he will be glad to serve friends old and new. We can recommend him, after years of pleasant business intercourse, as entirely competent and reliable, and wish him success in *der Vaterland*.

WESTERN ENTERPRISE.—One of the best examples of Western *life, growth, and enterprise*, is Mr. Charles W. Stevens, stockdealer, No. 150 Dearborn Street, Chicago. His advertisements will be seen in the proper place. He keeps everything the freshest, and best, and is always up to the times. Somehow he disposes of great stocks of our publications, and we think that is one of the secrets of his success. He keeps his readers well informed and posted, and their intelligence thus created enables them to do more business and need more goods. Hence *all flourish*.

Mr. Stevens's new illustrated catalogue is now ready, and will be sent free to all applicants.

DINMORE & WILSON, No. 125 West Baltimore Street, Baltimore, have sent us some excellent specimens of work. Mr. Dinmore is fully up to the times with his work, having been in the busi-

ness from boyhood, and in Baltimore for five years. Like many others, they conduct a "stock depot" with their other business, and endeavor to do it on right principles, namely, by filling orders *promptly*, and supplying only *good* articles at the lowest rates. They are already reaping the abundant reward they deserve.

SOME of our readers seem to think that our "Important Announcement" last month threatens evil; *Anthony's Bulletin*, for December, says: "We understand that on or about the beginning of the new year, the photographers of this city are to be introduced to a new *World*. We trust they may be prepared for the *change*." Now why didn't the editor say for us: "We trust they will be prepared *with* the *change*." The latter is all we ask, and little of it, too, in exchange for a *World* of good.

PHILADELPHIA JOURNAL OF INDUSTRY AND AMERICAN ENGINEER.—This is the title of a new illustrated journal, edited by H. Howson, Esq., one of the efficient counsel who labored so hard for us all in the Bromide case. It is neat in appearance, *live and spicy*, and the illustrations are fine. Mr. Howson's long experience in practicing at the patent office is a guarantee of the worth and success of this new enterprise. We wish it immense patronage. \$2.50 a year, weekly.

THE Eighth Industrial Exhibition of the Mechanics' Institute, San Francisco, will be held in August next. Parties desiring to exhibit will be supplied with a copy of the regulations by applying to the Secretary at San Francisco.

THE members of the Iowa Eclipse Party of 1869 have presented their portraits, elegantly framed, to Prof. Henry Morton, Ph. D., the leader of the Expedition; a fitting testimonial to an excellent man.

The testimonial was designed, and the pictures made by James Cremer, Esq., No. 18 S. Eighth Street, Philadelphia. Copies of the picture, 11 x 14 in size, may be had of Mr. Cremer.

Prof. Morton has been lecturing in Baltimore, Washington, &c., during the winter, to overcrowded houses of delighted people. He is preparing a rich treat for the photographers of America, who assemble in Philadelphia next June, when he will deliver two lectures.

WE are indebted to Mr. James Inglis, Montreal, for a fine composition picture of the skating carnival, similar to Mr. Notman's in our last, and for a large group of the Presbyterian Assembly.

PHILADELPHIA PHOTOGRAPHER, December, 1870. Bennerman & Wilson, Seventh and Cherry Streets. This publication has done a great deal for photography in America. No one engaged in it, or interested in it, should fail to follow the progress of the art as chronicled in this journal, which monthly adds all that practice and science afford to give precision and effect to the labors of those who are engaged in it as amateur or professional artists. So much encouragement has been given to the monthly publication that a monthly supplement will now be added, to be termed the *Photographic World*. It will be issued on the 15th of each month. There will be thus two magazines, which may be subscribed for separately, if desired, at \$5 each, or the two together for \$9. A fuller account of this enterprise is given in the present number.—*Phila. Age*.

"HELIOYPES."—Mr. Ernest Edwards, of London, has favored us with thirty-four heliotypes by his new process of printing on a gelatine film on glass, with printers' ink, in an ordinary printing press. They are of all varieties of subjects, and of various colors. They are printed on enamelled paper, with a clean margin. We shall, at some future time, give further details of the process, as we have given orders for prints for an edition of the *Photographer*. "Art, Pictorial and Industrial," is illustrated by Mr. Edwards's process entirely, but the letter-press, unfortunately, is of but little interest to photographers. Mr. Edwards's photo-mechanical process will no doubt find its share of patronage among the numerous ones now extant.

"GEMS OF AMERICAN LIFE."—Mr. H. Merz, No. 183 Essex Street, New York, has favored us with some very beautiful "gems" for the stereoscope. Mr. Merz is one of our best "composition" photographers, and shows great talent in such pictures as these. One entitled "Springtime," is a true "gem."

MR. A. E. LESAGE, one of our subscribers in Dublin, Ireland, has sent us some very excellent cartes, which speak very highly for photography in the Emerald Isle. Pictures from Ireland are as rare as emeralds in America.

MR. S. W. SAWYER, successor to Mr. J. Carbutt, Chicago, Illinois, has sent us a number of admirable "Rembrandt" and other styles of cartes, which show him to be equal to the task of making the best of work made there. They are excellent.

Mr. Carbutt is now living in Philadelphia, preparing to work the Woodbury photo-relief process.

RECEIVED from Messrs. Chute & Brooks, Montevideo, Brazil, some very creditable cabinet pictures, fully equal to the average American work. They take the *Photographer*, and are up to the times. From Mr. Charles Wetherby, Iowa City, Iowa, views of the Iowa State University, &c.; from Mr. W. E. Bowman, the progressive photo at Ottawa, Illinois, some elegant Victoria cards, stereo views, &c., all capital specimens of work; from Mr. J. B. Hamilton, Sioux City, Iowa, a quantity of stereos of wild Indians, camp scenes, &c., which are very interesting; from Mr. F. B. Clench, St. Catharines, Ontario, some cabinet size Rembrandt effects, showing very clever effort in this direction, made with the Ross lens. Mr. M. A. Kleckner has recently opened a fine new portrait gallery at Bethlehem, Pa., and sends us a variety of beautiful pictures made in his new studio. Mr. Kleckner is one of our young and enterprising photos, and knows his business. Only a few years ago we were co-workers in the same establishment.

Mr. E. Decker, Cleveland, Ohio, has sent us some cabinets of ladies in white veils, showing capitally the white draperies, and yet full time on the other parts of the picture. They are a novelty in their line, and very excellent.

MESSRS. J. J. REILLY & J. A. SPOONER, Stockton, California, have sent us some admirable views of the wonderful Yosemite Valley; the Big Trees in the Mariposa Grove; Salt Lake City; Union Pacific Railroad; the Sierra Nevada, &c., all of which are equal to the best we have seen of those regions, and are a great credit to the persevering artists who secured them.

ANSWERS TO CORRESPONDENTS.

"Box 135."—1. Do not give heed to such nonsense. What possible good can "oil of cloves and cod-liver oil" do in your collodion? Keep out such trash. Select good, plain, ordinary formulæ, and *fight it out* with them, and don't bother with these side suggestions. See "The Photographer on the Fence," in *Mosaics*, 1871.

2. Obey the instructions in "How to Paint Photographs," and if you are careful you will succeed in retouching negatives.

In his *third* edition, to be issued early this year, Mr. Ayres will give still more elaborate instructions on this subject.



W. C. NORTH,

Boston Public Library, UTAH, N. Y.

PRIZE PORTRAIT.

T H E

Philadelphia Photographer.

Vol. VIII.

FEBRUARY, 1871.

No. 86.

Entered according to Act of Congress, in the year 1871,

By BENERMAN & WILSON,

In the office of the Librarian of Congress, at Washington, D. C.

THIRD ANNUAL EXHIBITION

OF THE

National Photographic Association of the United States.

THE Third Annual Exhibition of the National Photographic Association of the United States will be held in Philadelphia, Pa., beginning Tuesday, June 6th, A.D. 1871, at Horticultural Hall.

Exhibitors from foreign countries are invited to bear the matter in mind, and to consign their parcels in good time. Ample preparation will be made to accommodate such contributions, and to care for them while here, as well as to return them when they are not to be sold for the owner. Foreign pictures will be admitted free of duties, and it is hoped to secure such arrangements as will bring very little expense for freight, if any, upon the exhibitor. Full particulars will be communicated by circular to all intending exhibitors who will address the Permanent Secretary for the same. Will foreign Photographic Journals please copy the above.

Further regulations for American exhibitors will be given hereafter.

Arrangements are pending with railroad companies all over the country by which we hope to secure unusual reduction in fares and freights, so that parties intending to exhibit, or to be present, will have

no pains spared to make the costs as small as possible for them. Ample hotel accommodations will also be secured at reduced rates. The Secretaries are determined to make every effort in their power to render the visit of their co-workers and their friends to this city pleasant, profitable, and comfortable, no matter how many may come. Begin to prepare *now* to come, and to have your best work here.

EDWARD L. WILSON,
Permanent Secretary, Philada., Pa.,
822 Arch St.

W. H. RHODES,
Local Secretary,
1800 Frankford Av.

THE PHOTOGRAPHIC WORLD.

A LITTLE later than was promised, but it is out, and many of our readers have seen it. If our supply should hold out, we intend that *all* of them shall see it; and if you who are *not* subscribers do receive a copy, we will be glad if you would so state when you send in your subscription. If you do not want to take it, at least oblige us by carefully reading the whole number. We printed five thousand copies, and yet we fear there will not be enough.

We have not started it any better than we mean to keep it up, nor as well, for as it grows we hope to make it better and

better. Of course we are not the ones to review it, for it is our own work, but we commend it to your tender mercies and favor, and hope each one of you will consent to its monthly revolutions into your studio, where we trust it may be a helper to you. All worlds shed light; ours shall shed none but the most actinic for your skylights, and if it is admitted into your dark closets, it shall not be a cause, but mayhap a sure preventive, of fog.

The contents of the January number is as follows:

Woodbury print and biography of Geo. W. Childs, Esq., the eminent publisher and patron of photography, together with the following articles: In the Beginning; Photography Abroad; On Washed and Fumed Paper; Sensitive Tests for Hyposulphite of Soda; Apprentices; The Use of Water Glass; Moonlight Photography; Photography in America, by Dr. Vogel; The Acceleration of Exposure; Substitute for Yellow Glass; The Lighting of Studios; Fogging; Impurities of Nitrate of Silver and How to Detect Them; Platinum Toning Bath; Atelier Construction Without Curtains; Cement for Dishes; Tin-foil for Packing Dry-plates; Wax Polish for Prints; Opal Glass; Grasshoff's Lime Toning Bath; Silver Residues; On Lenses, Diaphragms, and Focussing; Apparatus for the Rapid Filtration of Collodion; A New Developer; The Nature of Different Gums; Enlarged Photographs by means of Magnesium Light; Notes In and Out of the Studio, by G. Wharton Simpson, A.M.; Splashes of Silver; Subscribe Now; Photography for Boys; Our Picture and the Manner in which it was Made; The National Photographic Association; Report of the Committee on Skylights (five cuts); A Few Items Worth Remembering, by J. C. Browne, Esq.; A Secret Process Exposed (very important); Position and Composition; Newell's Dark Tent; Proceedings of the Hypo Club; To Young Photographers; The Magic Lantern, beginning of a Series of Papers by Prof. Morton; Table Talk; All the World Over; Items of News, and Editor's Table. Here is information from all parts of the old world in this new one, and yet the *Photographic Times* is added,

notice of which please see in editorials. We mean to make the *World* valuable to you. Take it now, while the numbers may be had.

How to View Stereographs Without a Stereoscope.

BY C. T. ZIMMERMAN.

To say the least, it is very convenient to be able to secure the solid or stereoscopic relief without the aid of the "scope." Those who are extensively engaged in the manufacture of stereographs and others will appreciate this. Pictures often get separated and are mismounted in spite of care taken to prevent it, whereas if the mounter possessed the above-mentioned faculty no mismounting would occur. A scope is not always at hand, and if it were time would be lost in adjusting it, &c.

I will endeavor, in as few words as possible, to explain how I acquired the habit, and by following the directions any one with a moderate allowance of patience and perseverance can do the same.

Hold a stereograph before you, as near as possible level, about the height of the eye, and, say fifteen or twenty inches distant; now glance immediately over the *centre* of the card at an object beyond, on the wall for instance. You will see not only the object on the wall, but you will perceive that the "right" and "left" of the stereo have slid together and *partially* overlap; then slowly lower the eyes to the *centre* of the card, and the two pictures will *entirely* overlap. You see, instead of two pictures, *three*; the centre one of which presents the stereoscopic relief.

By placing a dividing card against and at right angles to the stereo, only one picture will be seen, and that having good relief.

After a little practice you will be able to secure the effect as readily as with a "scope," and with much less fatigue to the eyes.

THIS is the season of dark days, when photographers should spend their time in storing up knowledge for brighter ones. We offer you a good chance in our book catalogue.

UNDER THE SKYLIGHT.

BY ROLAND VANWEIKE.

No. VI.

Rembrandts.

“WHY are they called Rembra’dts?”

I am glad to see you disposed to inquire into the why and wherefore of what we have to do with, Focus. Rembrandt is the name of a celebrated Dutch painter, who flourished more than two hundred years ago, in Amsterdam. He died in that city in 1669. He was celebrated more particularly as a portrait painter, and his popularity arose from the brilliancy of his chiaroscuro, or clare-obscure. The highest lights and deepest shadows were blended into harmony with such masterly skill as to give force and character to the commonest subject, and place the name of Rembrandt among those of the great masters in the art of painting.

The picture we call by his name is called so because it is after his style; that is, the lighting is similar, or is intended to be.

“Yes, but zome say they ha’dt ought to be called ‘Rembra’dts;’ that they are ‘shadow bictures.’”

I know it, Focus, but the name seems to have been first applied as the “Rembrandt style,” and from that the pictures have come to be called “Rembrandts,” and I cannot see that the name is misplaced or inappropriate. They say “shadow picture” has a meaning, and indicates what it is; so we might say *head cover*, instead of hat, or a *thing to ride in*, instead of a carriage. I believe the name to be a good thing, for many inquiring minds want to know the meaning of it, and will gain information in reference to art and what constitutes a good picture, that will break down some of the ignorance and prejudice that all good photographers have had to contend with, more or less, and the result will be that we shall all be benefited and nobody injured.

“That’s it, egzactly.”

But here’s a sitter, Focus; a lady to sit for a Rembrandt.

“Good! Now I wadt to see how you do it.”

In the first place, we find which side she is to sit, and arrange the light accordingly.

Bring that darkground up near the side-light and place this screen so as to shade a portion of it nearest the light. Place the sitter well forward, so as not to be back of the light, and carry that screen around on the shadow side, so as to give a good diffusion of light. Don’t get the reflecting screen too near, to cut off too much of the shadow. The camera stands about here, pointing well towards the light. Now, the fine profile this lady has will make that a desirable view of the face. Let the body be turned a very little from the front, and then the head inclined gracefully to the right till the profile is presented to the camera. That brings the front of the face against the shaded part of the background, so that we get the highest lights of the face against the darkest part of the ground. Now the next point to be considered is the regulating of the light. Draw down the thin curtains on the top-light till the direct light comes only from the lower side; now soften the side-light till we get the effect we want. There, you see by cutting off the direct light from above and letting the principal rays come from the side-light, the side of the face next the camera is entirely in shadow, while the other is brilliantly illuminated. How does that look to you, Focus?

“That looks about right.”

Well, now, move away those screens till they reflect no light to the sitter, and let the curtains run up on the side and top-light. There, how does that suit you?

“I do’dt like that so well.”

Very well, Focus, I just wanted to see if your photographic eyesight was good; that is, if you saw understandingly. Make a picture of that face, as it is now lighted, and we should have violent contrasts of light and shade, making a picture disagreeable and repulsive instead of beautiful and pleasing.

“Yes, that’s just like some bictures a friend of bine got; six for a dollar.”

Well, he probably paid all they were worth. Now, Focus, rearrange the curtains and screens, and see when you have them right. That’s very well. I’m glad to see you have profited by the instruction you have had. There is no style of light-

ing that requires so experienced and educated an eye as this. It is in this style of picture that the suggestions I made in a former lesson come into play. Here is where you *must* learn to *see* your lights and shades; you must see them just as your lens sees them, and just as they are received on the plate. These sittings require a good, full exposure to bring out all the detail on the shadow side. Generally fifty per cent. more time than the ordinary lighting.

The next is a gentleman; that will look best with about a three-quarter view. This requires very careful management of the light. A view that just catches the line of the nose is favorable, if it does well for the general outline of the head and face. If more of a side view is necessary, care must be taken not to have the cheek and nose illuminated the same, or they will run together, and the shape of that very important feature, the nose, will not be defined. Turning the subject a little more from the light, so that the strongest illumination will be partly from behind, will throw the front of the cheek a little in shadow, while the nose, catching the full light, will be well defined. A dark complexion will not bear so much shadow as a light one. Care must be taken in this view to get no reflections in the eyes from the screens. It is well to have this one behind the camera darker on one side: a gray or dark blue, that will give a neutral tint, so it can be turned when desired. That looks very well. There is a satisfaction in doing this kind of work when we have subjects suitable for it. But it is surprising how quick people have caught the idea that a Rembrandt will make the plainest face brilliant and beautiful. I believe they are better posted on the characteristics of Rembrandt's style than we have given them credit for.

The unfortunate ones that "never had a good picture," are all out after the new style. The old, gray, and wrinkled want to try something that will, perchance, restore to them the force and vigor of former years, and smooth the furrows that time has wrought on their brows. The young lady, who has been a young lady for many years, and has never passed a certain age, whose mirror has grown old, and is not as

true as it used to be, comes to try a "Rembrandt," hoping to have the hollows in her cheeks filled up, and the winning grace and beauty she has so long sighed for restored by its magic touch. And so we might go on and describe the loafer who comes in drunk, and wants "to get a rumburnt—hic—taken," and who makes one feel as though he would like to read a lecture on temperance to him. Beware, Focus! We see in the cars sometimes the notice, "Beware of well-dressed men who ask you to play euchre." I would say, beware of *anybody* and *everybody* who asks you to take a drink, or take a glass of wine. But enough, we must come to business, and dispose of this question of "Rembrandts."

"Well, are Rembrandts ever made lighted any other way?"

Yes; a picture lighted in the ordinary manner may be just as much a Rembrandt as the shadow picture, if the same character of light and shade be given to it. But your own practice, and a constant and careful study of chiaroscuro, will educate you more than all the lessons I can give you here, if we were to keep at it indefinitely. Under the skylight is not the only place to study faces, but wherever you may meet them. On the street as you pass along; in your own home; in church is a capital place to study the minister, but don't close your ears because your eyes are open. I don't mean any disrespect to such a place or occasion, nor am I inattentive to what is being said, but whenever I am in church I am continually making pictures of the minister. Every turn or gesture presents him in a different light and attitude, and affords a constant study. Whenever you see a number of persons together, you can watch the play of light upon the faces, and form them into groups as they change positions.

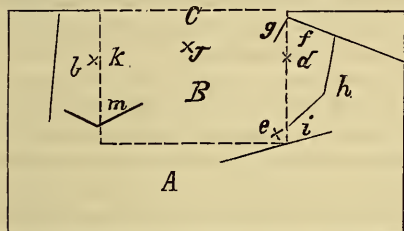
"But what benefit will that be to me in here?"

A great deal. You are constantly being educated in seeing lights and shadows on the face. Whenever you see a face lighted effectively, notice where the light comes from, and how it strikes the face, and you may be able to come under the skylight and produce the same effect. Study pictures, paintings, and engravings wherever

you can see them; and when you see one that you like more than another, look it over, and see what it is that makes it effective. Notice the background, the drapery, and the surroundings, and accessories, if there are any, and study out the relation one bears to the other.

"I'll do that; I like to look at pictures. But I don't believe I can remember how you arrange things here if I should go anywhere else. Suppose you give me a plan of the room, with the arrangement of screens and things?"

Very well, you shall have it. Here's a diagram I have sketched for you.



A is the operating-room; B, the skylight; C, side light; *d*, sitter; *e*, camera; *f*, background; for Rembrandts, this should not be too dark; many make a mistake in using a very dark ground. An umbel tint, or something a shade lighter, does well; *g*, a semi-opaque screen, hinged to or placed against the end of the background. This is for the purpose of making that side of the ground darker. It accomplishes in some measure what is produced by a cone or curved background. If you want something expensive, you can buy some one of the several patterns that are in the market, or there is a good description of how to make an "alcove ground," with a diagram, in the January number of the *Philadelphia Photographer*. But I want to give you something that you can use, or find in any gallery. If it is desirable to have the ground lighter on that side, leave the screen away; but it is rather more artistic to give the ground a darker shade on the side nearest the light. *h* is a screen with a joint in the middle, or two separate screens, covered with white muslin to use as reflectors; *i* is a screen with one side light, and the other a sort of neutral tint. These are the arrangements

for Rembrandts, showing the left side of the face; and when you want the right side, make the same arrangements on the other side of the light. For ordinary sittings, the camera is at j , the sitter at k , background l , and side-screens m , and vice versa for the other side of the face. Under a differently constructed skylight you might be obliged to make some variation from this arrangement, but with a little care and judgment it can be applied under any light. Go to work with a determination, your eyes open and your wits about you; and if you don't get what you want with one trial, make such changes in position, light, or background, as you think may be necessary, and try again. Persistent effort, if you have a love for your business, will be sure to give success.

ON VARIOUS PHOTOGRAPHIC SUBJECTS.

COLOR AND TEXTURE OF NEGATIVES.

SOME wet negatives exhibit a peculiar cream color, which occasionally reaches to a faint pinkish tinge. I had often observed this without even guessing at the reason; but the observation of an extremely great variety of negatives made in the most different manners, has led to the explanation; the color in question arises from a certain degree of fineness of the deposited silver.

In working, some years ago, the glycerine and honey process of Mr. Harrison, I noticed the almost excessive fineness of the deposit of which the negative was made up; a fineness that made the negatives suffer more than negatives ordinarily do, in the fixing-bath. Connected with this fineness of deposit were some curious freaks of color. For example, if the negative was considerably over-exposed, the sky would come out blood-red. This deep red color was connected with an extraordinary fineness of deposit, so great as to render that part of the negative quite transparent, so that it looked not unlike the ruby glass used in stained glass windows.

This red coloration by extremely fine particles of a metallic body, ordinarily destitute of that color, is very curious, and reminds one of the experiment in which gold is re-

duced to so fine a powder that it remains suspended in water for weeks, imparting to the water a deep red color.

In the glycerine and honey process, red is not the only color produced, but shades of purple, and even of blue; these shades seem to indicate a still greater degree of fineness of deposit. These seem to show that iodide of silver is capable of assuming a variety of shades of color, just as chloride can.

This influence of the fineness of deposit upon color may be roughly exhibited in the following manner:

Let a piece of glass be ground on one of its surfaces with common sand. Its texture may be taken as a comparison for certain negatives of extremely coarse grain taken under conditions that will be referred to presently. If we use finer sand, we get a finer grain, corresponding to that of another class of negatives. But if instead of sand we take fine emery, and simply "gray" the glass, that is, just take off its surface, we shall find that if we observe a distant bright object, as a white window-shutter across the street, in direct sunlight, it will show a distinct light-orange tint. This property of the glass is much more strikingly shown by closing a window-shutter, and allowing a beam of light 3 or 4 inches square to fall on a table. On the table a piece of looking-glass, or even a piece of ordinary window-glass, is laid, so as to reflect the beam of light upon a white ceiling. If the piece of grayed glass be held in the path of the ray, the spot of light on the ceiling will change from white to orange-color.

The matter has also a certain practical interest in this respect, that these negatives with a creamy shade of color seem to print particularly well, and to give a beautiful silky, velvety look to the print. Without undertaking to affirm that the finest quality of print can only be got from such negatives, I think I may say that coarser grained negatives are not very apt to produce them.

It is certain that a large proportion of bromides in the collodion is very apt to produce a granular crystalline, very white, deposit on the negative, and moreover that such negatives, however fine they may look to the eye, are very apt to be disappointing in the printing. They mostly prove to be

thinner than they seemed, and to give a tame and characterless print. Some of these negatives will deceive even very experienced printers.

On the other hand, a good cream-colored negative will often be found to be completely free from all traces of granularity. In some conditions of the bath, the material of which these cream-colored negatives are built up has a certain clearness about it, so that it, so to speak, looks as if it had been mixed up with varnish. Such negatives are apt to give soft, bright, silky prints.

Of course, other conditions besides excess of bromide in the collodion, will give gray granular negatives. Very acid baths, or old baths, tend that way.

I have never tried the plan of putting glycerine into the developer, which was proposed not very long back. But if it should be found to promote fineness of deposit, it would have a real advantage, and the facts that I have mentioned respecting the glycerine and honey-bath, would seem to render this at least possible.

ALKALINE DEVELOPMENT.

I return to this subject to mention what I find to be a convenient and advantageous mode of managing it.

Before commencing to develop a set of plates, put into a small vial

Eighty-gr. solution of Carb. Am., 3 drachms.

Sixty-gr. solution of Bromide Pot., 1 drachm.

Shake these well together.

Next place (for a $6\frac{1}{2} \times 8\frac{1}{2}$ plate) 4 ounces of water in a pan that will just take the glass plate. Add to this half a drachm of 60-grain solution of pyrogalllic acid, agitate to mix, and put in the plate, which will simply need to have the backing sponged off, but not to have had the face washed.

The liquid moistens the plate all over, but does not develop anything (usually not, unless the exposure was too great, or the pyrogalllic acid has traces of ammonia in it from being measured in the same minim glass as the alkaline mixture without intermediate washing). Now remove the plate and add to the pyrogalllic acid and water *twenty minims* of the mixture of carbonate and bromide. Agitate and put

in the plate. The sky at once appears, and presently the details (in the case of collodion-bromide plates, prepared as I have described,) come as rapidly as in wet-plate development. Just as soon as the details are out the plate is again taken out, and about twenty-five minims of the carbonate of ammonia solution without the bromide are added. This completes the development.

Always, however, the operator watches the character that his plates show. If there is a faint disposition to veil, the bromide should be increased. Any desired degree of brilliancy is got in this way, up to the most brilliant ambrotype effects. This last, however, is undesirable and tends to the production of hard prints.

GUM-WATER ON NEGATIVES.

A negative which, after it has been left to dry, is found to need a redevelopment with pyrogallie acid and silver, is exposed to a certain amount of danger of splitting in drying. Some collodions show this tendency to a much greater extent than others.

To meet this risk, it is commonly advised to flow the plate over with gum-water or with a solution of gelatine. As the solution of gelatine needs to be warmed, the gum-water is the most convenient, and is, I suppose, the most generally used, and it certainly does prevent the splitting.

But it is liable to a very grave objection. The plate must be varnished after the gumming, because with the faintest trace of moisture the gum surface would stick to the silvered paper and ruin the negative. It therefore needs varnishing, and there is no difficulty in varnishing it *apparently* very well. Unfortunately the varnish does not penetrate the film; the gum renders such penetration impossible, and consequently the negative has no sufficient protection. The protection afforded by the gum is very insufficient. Gum holds badly on glass and is liable to scale off. So that a negative that has been gummed and varnished is in a peculiarly insecure state and will not bear the least careless handling.

It is difficult to know what to do with negatives that are in danger of splitting. The gum is very objectionable for the rea-

sons just given. It might perhaps answer, as soon as the negative is finished and washed, to flow it with alcohol until the water is well out, then varnish cold and dry well by heat. This would seem likely to give a good result and obviate all difficulties.

ROSS LENSES.

WE were asked so many questions concerning the Ross lenses, introduced into America during the past year, that we felt it our duty to test a number of them practically, and report on them, for the benefit of those contemplating the purchase of new and better lenses. This we propose to do in two short chapters, first stating what we have found to be the general qualities of the lenses, and then pointing out what we find to be the advantages of certain sizes and numbers for special classes of work, and we have waited to do this until we could be governed in what we say by the results of actual trial.

First, then, the

Rapidity and general quality of Ross's Lenses.—Ross's portrait lenses, already in previous use in all the chief photographic galleries in Britain, suddenly acquired in 1851 a world-wide reputation in consequence of the report of the jurors in the first great International Exhibition, in which it was stated that Mr. Ross had produced the best portrait lenses in the Exhibition, that they gave a flat field, and that the images were sharp up to the edge. Ever since then these lenses have been yearly growing more and more into favor, and Mr. Ross's fame as an optician more and more enviable. Scarce a practical or amateur photographer exists in Great Britain, of any note, who attempts to get along without *some* of Mr. Ross's lenses. The fame of Mr. Ross then spread to America, and many of his lenses were brought over here by one and another, until finally he was induced to open an agency, and keep a fine stock in this country.

The lenses made by Mr. Ross at the present time, he tells us, possess a greater degree of brilliancy than those hitherto made, in consequence of the refinements that have been introduced in the manufacture of

Chance's optical glass of the finest quality, which alone is used in the making of these lenses. The superior brilliance and sharpness obtained by Ross's lenses is wonderful, and arises from Mr. Ross having so computed their curves as to bring into one focus all the chemically or actinically active rays of the spectrum, thus securing the greatest amount of rapidity that is capable of being obtained; while at the same time he has made the visual focus of each lens to combine in the most strict manner with its chemical focus. In consequence of this perfect coincidence of the visual and the chemical foci, the photographer may employ a powerful magnifying glass to aid him in obtaining the sharpest possible focus in the camera, in the certain knowledge that everything, even to the minutest point, will be found produced on the sensitive plate.

Sharpness.—Ross's portrait lenses are so constructed as to produce the greatest possible sharpness that can at all be obtained by optical means. As an example of the exquisite definition that attends their use in the hands of a skilful operator, it may be stated that the enlarged portraits of Mr. Collier, of Inverness, recently exhibited in England, and which were stated by the press to be the finest and sharpest enlargements that have ever been produced, were all effected by Ross's portrait lenses when used without any diaphragm. This is a critical test for the defining power of a portrait combination, and is the result of a perfect correction of the spherical and chromatic aberration. Their great value in this respect may be ascertained and tested by taking with one of them an ordinary carte portrait and enlarging it up to 12 x 10 size. Now place a portrait of the latter size (but taken direct in the camera by means of a large lens) side by side, and on comparison there will be found so little difference in respect of sharpness that in most cases it is impossible to judge between them.

Depth of Focus.—The defining power of the lens is so adjusted in its extension, that when the sitter has been placed at the proper distance from the lens, every part of the subject is given in perfect sharpness when the face of the sitter has been focussed. But

as photographers have not always space at command in their studios to remove the sitter to the proper distance, and this especially in the case of *large lenses of long focus*, any required degree of *depth of focus* may be obtained by means of the diaphragms. If the sitter be placed closer to the lens than usual, and the face be focussed with the full aperture of the lens, the plane of the face will be sharper than the back portions of the head. But to render the latter equally sharp, it is only necessary to insert a diaphragm to limit the angular aperture of the lens, when the "depth of focus" will be extended to any desired length. The so-called "diffusion of focus," that is, having *no part* of the picture sharp (implying that the lens is not properly corrected), does not pertain to any of Ross's portrait lenses; but this quality can in any of his lenses easily be obtained, if desired, by the substitution of an imperfectly corrected element in the combination. The proper way to obtain that lowered definition mistakenly called "diffusion of focus," is to take the sharpest possible negative, and, when printing, to interpose a film, such as gelatine, tracing paper, or even common writing paper previously saturated with wax or varnish, between the negative and the sensitive paper. In this way the asperities consequent upon the intense definition of the texture of the skin may be softened at pleasure. Both in theory and in practice is this found to be the best way. From a negative that is "fuzzy" (that is, deficient in crisp definition), to commence with, it is obvious that no sharpness can ever be obtained; while, on the contrary, from a negative possessing the most intense definition, a picture ranging from absolute sharpness down to a hazy indefiniteness, may be secured by any intelligent printer. In the production of negatives of this class, Ross's lenses are acknowledged to stand pre-eminent.

While we are always charmed with softness, we never could tolerate a "diffusion of focus" picture or a fuzzy "mezzotint." We do not say that we have not seen pretty ones occasionally, but as a rule they are bad and objectionable. Give us a good, round, rich negative, properly timed and exquisitely sharp, and no after-dodge can excel it.

In our chapter on this subject next month, we will point out some of the special grades of the Ross lenses that are best adapted to special and ordinary classes of work. We have some very gratifying results to report. The picture of George W. Childs, Esq., in the first number of the *Photographic World*, was made with a No. 2 Ross cabinet lens, and it might meanwhile be studied.

THE NEW SIZE, ETC.

WHAT can they do with it, this so-called "Victoria card," the new size? It is useless for framing; it does not fit the old albums. Does any one suppose that the furore that has died over the *carte de visite* will break out again to consume this hybrid by the million?

Per se, the size cannot be objected to; it is, perhaps, better than the old style *carte de visite*. But think well over my conundrum, and let us have some probable answer. Our experience with the cabinet, or imperial card, shows that the *oi polloi* will not buy their albums over again. Here and there a photographer has got up a run, and even a reputation on them, but with most of us they go slowly. It is difficult for the customer to know what to do with a dozen. People have not albums for them, so they try framing, and find that they fit well into nothing inexpensive. There are the little rustic frames, abominably paltry. There are the *passepapier*s, with black ovals and outside, look like mourning. Those with a flock bevel; they fade. And by the time the dozen are decently framed they have cost three times as much as originally expected. That experiment will not soon be repeated; and the photographer's share, perhaps, not more than \$6 to \$10. If the sitter could have been persuaded to invest half the money in some style of photograph that would have been all ready to give away without further expense, she or he would have been encouraged to try again, and felt grateful to the photographer for having provided a cheap luxury; at the same time photographers would have made more money. If the cabinet card could be put up as above indicated, the demand for it could be quadrupled in a few months; at

least so this correspondent thinks, and thinks it could be done somewhat thusly: Let ye enterprising stockdealer go to some designer of skill and taste, and have patterns drawn and colored, which can be lithographed on mounts 10 x 12 outside; let these designs be rich and rare as the illuminated borders of an old scroll; they can be printed in one, two, three, or more tints, on fine mounts. Avoid anything that is cheap or tawdry. On these we will place our imperials, and it will be a picture that laid on the table or in a portfolio, is complete. At the same time it could, if desired, be slipped into a light frame, and be much nicer than any of the arrangements of mats that we now have.

A suggestion, for a special portfolio, may not be out of place, made in the form of a shallow box, with a hinged cover; they would accommodate these pictures in any number, twenty-five, fifty, a hundred, or more, and be durable and inexpensive, while the contents could be examined by a party of a dozen simultaneously. A similar plan could be applied to the Victoria, were it not that we are already cursed by the confusion of the public over our too large variety of sizes. Mr. Bendann recently sent you an excellent article on this point, showing that, in his own business, the cutting off of many sizes and styles had been attended with increased profits. The true policy would be to seek constantly to perfect the established varieties, and of those, that which really possesses the most sterling merit, the photograph on paper. Every now and then photographers rush to buy some new process which is sure to have a run, so the vendors say, and after spending their money and bothering their brains, find out that the movement was retrograde. There was the ambrotype, which was miserable alongside of the daguerreotype, to which latter we would have doubtless returned, but for the introduction of the photograph on paper. There was the porcelain picture, the first specimens of which were horrible, and which now is rarely tolerable, except when finely colored, and always artificial. This present year has seen the ephemeral photograph, over the sparks of whose lingering vitality I breathe tenderly, for they may yet

light me the way to find again my \$25. In the shape in which it was introduced it was not a desirable picture. Nothing can make the chemical image homogeneous in quality with the scribbled lithograph, intended to support the former. Indeed, the getters up of the sheets seem to have tried to make them as tasteless as possible, by limiting the tint to a small square, and putting underneath the ugly copyright lettering, which would deface the picture, even, if otherwise, it were beautiful.

Besides these, we have smaller sells and processes uncountable, all of which, with once in a while a practical feature, have in common this one objectionable point, that they profess to supplant the use of brains and skill, by making short cuts to the terminus of the long road of art. *None such will ever be found.* The educated eye and hand will always command its price. Photography itself is a notable instance that seemed at first to prove the contrary. What, a complete picture, in a few seconds, by means of a little machinery and chemistry! then gone was the limner's trade; and many indulged in this latter anticipation. Just now, however, it begins to be suspected that a whole artistic education and skill are necessary to the proper handling of the little machinery and chemistry.

But don't suppose that this writer is an entire conservative. "Prove all things, hold fast that which is good," is the rule.

All this humbug has in it some seeds of good; conversely, all good things have their abuse. Some photographers retouch their negatives to death, against which your correspondent has, by your kind consent, made a protest, almost an unheeded one. Other photographers, on the top of the negative retouching, touch the albumen print till the picture looks as if it had been copied from a wooden image carved smooth and sandpapered. Such productions are as bad as can be. They lie. They deface the glory of our beautiful art. They pander to a vicious taste. With much satisfaction we read that there are "limits to retouching." Let us observe these limits.

Now, good Journal, are you bored? Are these views too individual?

Let us have something practical. In the

gallery we sometimes are called on to copy plans in line drawings: these should have a special intense collodion, but in a portrait business it is not often on hand, yet we want to make a negative that will print the lines clear, and keep the paper between clear too. This can be done only by a vigorous intensification. Pyro and silver alone won't do enough, but the following will:

A little short time the negative; don't hold the iron on too long; wash; apply pyro with silver; wash; clear with cyanide; wash well; flow with bichloride of mercury solution; wash; flow with a weak solution of iodide of potassium; wash. If now the negative is almost strong enough, flow with sulphuret of potassium, and give a final washing. If it must be forced farther, make another application of silver and pyro, when you can repeat the mercury and iodide, with the respective washings, and finish this time with the sulphuret, or the silver can be for the third time resorted to, and then again a round with the mercury, &c. Observe: don't finish with the mercury; don't apply the sulphuret immediately after the mercury, without the intervening iodide, but the mercury can go on again after the sulphuret.

By a few experiments the right strength of the solutions can be determined, and any amount of intensity obtained from the most shadowy negative, though it cannot be claimed that the result will be as good as if the first development had been vigorous. The negative is probably an unchanging one. For reducing the strength of a negative if it has been intensified with sulphuret of potassium, a strong solution of cyanide of potassium works well. Of course the varnish must be removed thoroughly. If the negative is too intense, by reason of accumulated silver, flow with bichloride of mercury, wash, then flow with weak cyanide, repeating the operation as often as necessary, being sure that the washing after each chemical application is thorough. The reductions in both cases will be perfectly uniform, not injuring the lightest detail in the shadows, and far different from the eating of iodine and hypo, or cyanide.

W. J. BAKER.

ON SOME CAUSES OF FAILURES IN PORCELAIN PRINTING.

BY DAVID DUNCAN.

MUCH, indeed, has been written respecting the porcelain picture, and many formulas for making it have also been published from time to time. But, it is not enough that a simple formula be given; it is indispensable that details, respecting the compounding of the ingredients used, should be stated, as the secret of success lies therein. It is true that the process is practiced successfully enough, and the "modus operandi" is simple enough. Nevertheless, it is not unfrequently attended with many difficulties or even failures. Mottled appearance of the print with a multitude of white spots; a dull, flat picture, and a want of uniformity in brilliancy and tone, are among the troubles which beset its successful working:

Recent experience has led me to determine that failures result from the following causes:

1. Not using fresh albumen.
2. Keeping the plates too long after albumenizing.
3. Insufficiency of ammonia.
4. An excess of nitrate of silver.
5. In compounding the chemicals.

The albumen should be thick, fresh, clear, and pungent with ammonia; therefore, the quantity of ammonia may be increased beyond that recommended in the many formulas published; too much, of course, should be avoided. After the plates are coated with albumen they should be speedily dried, but the drying should not be accelerated by heat. By using the albumenized plates as soon as they are dry, brilliant pictures will be secured, as much of the ammonia which plays an important part, will be retained, and not lost by evaporation.

In mixing the chemicals I take 8 grains of citric acid and 8 grains of chloride of strontium, calcium, or lithium, the latter chloride by preference, and grind them up in a mortar with 1 ounce of Atwood's patent alcohol, and pour into a clean bottle.

I should here remark that the quality or specific gravity of the alcohol employed is of importance. 1st. Some samples will dissolve more nitrate of silver than others.

2d. Some samples will dissolve gun cotton more readily than others. It is of some moment that the alcohol and gun cotton employed, should make a clear collodion without sediment, and it must be understood that a certain quantity of nitrate of silver is required and no more. I next take 4 ounces of concentrated ether and 3 ounces of alcohol, mixed in a bottle, and dissolve therein 40 grains of nitrate of silver by triturating in a mortar; this must be done effectually and speedily, so that too much of the ether may not be allowed to evaporate. When the silver is thoroughly incorporated I add 50 grains of gun cotton, and shake until dissolved; then mix (a very small quantity at a time, shaking well, in the dark-room) the ounce of alcohol containing the citric acid and chloride. A few drops of water may be ground up with the nitrate of silver before mixing with the alcohol and ether, to facilitate the operation. It will be seen that I recommend incorporating the silver with the ether and alcohol before the cotton is added. I do so for this reason,—a more perfect combination is effected. When the cotton is added the density is increased, consequently the nitrate of silver is not so effectually combined or dissolved. The silver should not, by any means, be ground up with the alcohol alone, as a precipitate, injurious to the brilliancy of the picture, is formed upon adding the ether. Sixty grains of nitrate of silver is generally recommended, 40 grains, however, is quite sufficient. An excess will crystallize upon the surface of the collodion, when dry causing streaks, mottling, and spots. I find it very beneficial after coating the fresh albumenized plates with the sensitive collodion, to put them in a box, with a cover, not too large, containing a tuft of cotton-wool, moistened with ammonia, until they are dry. In conclusion, I may add, that some peculiar yet pleasing tones can be obtained by using gelatine, to which ammonia is added, instead of albumen, but the latter organic substance is to be preferred.

In cold weather longer exposures are necessary than in warm, and care should be taken to keep the solutions of an evenly warm temperature; 70° is always safe. Never let them get below 55°.

PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.

A STATED meeting of the Society was held January 4, 1871; the President, J. C. Browne, Esq., presiding.

The minutes of the last meeting were read and approved.

The Secretary presented a package of prints sent by the Liverpool Amateur Photographic Association in exchange for some sent them by this Society.

On motion, it was resolved "that the Photographic Society of Philadelphia receive with great pleasure the very choice specimens of their work sent by the Liverpool Amateur Photographic Association, and hope for the future that the system of mutual exchanges will be continued."

The chairman of the Committee on Prize Medals then gave to each of the successful competitors the medal awarded to them.

Messrs. Browne and Wallace then presented copies of their prize pictures framed, to the Society, and received a vote of thanks therefor.

On motion, the prints from the English Society were referred to the Room Committee for mounting.

Mr. Wenderoth gave an interesting account of some improvements in the carbon process, made by himself. Besides, an improved method of making the tissue for the ordinary process, he claims to have discovered a way of printing *direct*. Experimenters in the carbon process have thought that this could not be done, but Mr. Wenderoth thinks it an established fact that it can be done. In this new process, the progress of the printing can be watched through the back of the paper and stopped at the proper time. The prints when finished appear to have nothing on their surface but the pigment itself; the color is as fast on the paper as any lithographic material would be. The prints can be colored by the artist with ease, and this process can even be worked in *oil color*. A curious feature of this process is, that by changing the solvent, or the developer, a negative can be produced direct from a negative, or a positive from a positive.

THE PENNSYLVANIA PHOTO- GRAPHIC ASSOCIATION.

THE stated meeting of the Association was held at 822 Arch Street, Monday evening, January 9th, 1871, Mr. Albert Moore, Vice-President, presiding. After roll call and the reading of the minutes, Messrs. H. Chilman, C. M. Gilbert, E. Moelling, J. E. Smith, and George G. Wise, were elected members.

The paper for the evening was then read by Mr. W. L. Shoemaker, assistant to Mr. Moore, the solar printer, "on positive printing." Mr. Shoemaker illustrated his paper by a number of prints of one subject from the same negative, printed and toned by ten different city photographers by as many different methods. His paper was greeted with applause, and followed by a discussion on the different methods of printing; and the advantages of heat in changing the tone of prints on paper and on porcelain. Mr. Saylor said it was his habit in porcelain printing, to dry the plates spontaneously when he desired a warm sepia tone, and if they were a foxy red, he could improve them by drying by heat. Mr. Schreiber said if cyanide was used for fixing, the print and the tone of the porcelain could both be regulated and reduced.

Mr. Shoemaker offered a duplicate set of his prints to be sent to the St. Louis Photographic Society by this Society. They were accepted, with thanks to Mr. Shoemaker, and ordered to be sent as above. Mr. C. Evans exhibited a paper and a porcelain print from the same negative, and volunteered to read a paper on the production of proper negatives for porcelain printing at the next meeting.

It was resolved that the party reading a paper, should be entitled to nominate the one to read one at the next meeting. Mr. Shoemaker, therefore, nominated Mr. Gerhard Schreiber, and Mr. Schreiber was accordingly appointed by the chair.

A negative was shown with the film badly split up and partly dissolved away, the party claiming that it was caused by the varnish. Several *guesses* were made as to the cause, as it seemed an unusual effect, and among others the following: 1. Dirty plate and old,

thin collodion; 2. Intensified with bichloride of mercury, and varnished with a varnish containing ammonia; 3. More alcohol in the collodion than in the varnish; 4. Imperfect fixing and washing; 5. Undertimed, improperly washed, and film eaten away by bichloride of mercury; 6. Rotten collodion, and dirty plate. No one seemed to think the varnish did the mischief, and a vote was taken on the subject, and it was decided that the varnish could not have caused the breaking up of the film. Mr. Clemons then stated that the varnish used was his new N. P. A. varnish, and he was glad to find it innocent, as he knew it was. In answer to the second guess, he stated that there was no ammonia in his varnish, and it would dry without heat in a room of 60° temperature.

The Secretary, Mr. R. J. Chute, then read his annual report, which follows.

Dr. Vogel was then unanimously elected the first honorary member of the Society, the vote being taken standing.

Mr. Wilson stated that there was another gentleman, a warm friend of America and American photography, whom he desired to propose for honorary membership, Mr. G. Wharton Simpson. His proposition was heartily received, and Mr. Simpson unanimously elected.

It was resolved that the protest of this Society be filed with the Commissioner of Patents, against the extension of the patent for solar cameras, granted D. A. Woodward, February 24, 1857; and the Secretary was instructed accordingly.

Mr. W. H. Whitehead, of Pittsburg, Vice-President of this Association, was present this evening.

Mr. Bigelow's revolving background was exhibited, and seemed to attract a great deal of admiration, and to be considered an excellent thing.

On motion, adjourned to witness the Sciopticon Exhibition by Mr. Marcy. Among other transparencies shown, were a series of views off Nahant, by Mr. Sturgis, and another series of Fairmount Park, by Mr. Jas. Cremer.

The Photographic World is ready. Subscribe for it early.

REPORT

Of the Secretary of the Pennsylvania Photographic Association.

MR. PRESIDENT AND GENTLEMEN
OF THE PENNA. PHOTO. ASS'N:

YOUR Secretary begs leave to submit the following report for the year 1870:

Whole number of members enrolled at date of organization, Sept. 8th,	43
Number of members elected at the three succeeding meetings,	20

Making the roll of membership at the close of the year,	63
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The receipts have been as follows:

At the meeting in September,	\$42 00
“ “ October,	22 00
“ “ November,	27 00
“ “ December,	12 00

Making the total amount received,	\$103 00
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All of which has been paid over to the Treasurer, and his receipt taken therefor.

Our Association, though yet in its infancy, being scarcely six months old, has already assumed quite mature proportions, and bids fair ere long to attain a robust and well-developed manhood. It sprang into existence like many other good and useful things somewhat incidentally, or accidentally; that is, it was no part of the purpose for which the photographers met when the proposition was first introduced.

On the evening of May 19th, “a meeting of the photographers was held at the store of Messrs. Wilson, Hood & Co., to see about attending the National Convention, at Cleveland, in June, and to take some action in reference to a reception for Dr. Vogel.”

Thus we see from the records that the National Convention and Dr. Vogel were the powers that brought the elements together, and the natural cohesion, or common interest the individuals felt one in another, made them at once wish for some further bond of union and fraternity; for a little further along in the records we find that “the question of forming a practical photographers' society was discussed, and all present favoring the movement signed a paper to that effect.”

At an adjourned meeting, held one week

later, May 26th, a temporary organization was effected, and the newborn was represented at Cleveland under the name of the "Pennsylvania Photographic Society."

On the 29th of June a third meeting was held, and the Society organized, permanently, under the name of the Pennsylvania Photographic Association.

That meeting adjourned to September 8th, when the organization was completed by the adoption of the by-laws, and the meetings have since been held on the second Monday in each month.

Thus we close the year 1870 with a roll of 63 members, and all our prospects most hopeful and encouraging.

We are certainly under deep obligation to our good friends, Messrs. Wilson, Hood & Co., for their great generosity in providing the Association with this commodious place of meeting, and there is, perhaps, no better way in which to express our gratitude than for each one to work with a will for the interest of the Association, by bringing in new members and doing all that can be done to make the meetings interesting. Here is where we may each be benefited by striving to benefit others, and here is where we may work together for the Exhibition next summer; and it should be with the determination that Philadelphia shall not be outdone by any city in the world.

In closing, I wish to do so with a motion. As the high respect and esteem we had for him was one of the motives which first brought the members of this Association together, I move that we do ourselves honor by electing Dr. Herman Vogel our first honorary member.

Respectfully submitted,

R. J. CHUTE,
Secretary.

ON POSITIVE PRINTING.

BY W. L. SHOEMAKER.

To the Officers and Members of the Pennsylvania Photographic Association, assembled January 9, 1871.

IN presenting this paper I shall only attempt to explain that which has proved of value in practice; and the prints used in

illustration were not made for competition, and therefore must only be criticized by the tone.

In positive printing on paper, the paper is immersed or floated on a solution containing chloride. After drying it is floated on, or swabbed with, a solution of nitrate of silver, which after exposure, to reduce the chloride, is fixed in a solution of hyposulphite of soda. This is the simple base of printing.

The quality of the print depends upon the amount of salt used in forming the chloride of silver; the manner of applying regulates the amount in the paper.

The kind of salt used regulates the color or strength; the organic substance used in combination with the salt determines the sensitiveness.

Immersing salts more strongly than floating, and floating more than swabbing. Therefore, heavy paper which requires a heavy salting, we immerse; medium which requires less, we float; thin absorbs quickly, and we swab it.

The chloride of ammonium produces purple or black tones; chloride of barium sepia or brown tones; chloride of sodium blue tones. We prefer the use of chloride of ammonium. Gelatine, arrowroot, albumen, and other organic substances are used in salting, to give body or strength to the surface, and have different degrees of sensitiveness. Gelatine, with us, has always been found the easiest managed, and most sensitive.

Saxe paper requires to be floated longer than Kives's, which is more absorbent. This applies both to plain and albumen paper.

I find great difference of opinion existing in regard to the proper strength of silver, and as to the time of floating and fuming.

The time of floating determines the delicacy of the print, and the strength of the silver the strength of the print.

I have found more prints ruined by floating too long, than by any other error. Paper floated too long absorbs too much silver; decomposes much quicker; gives less definition in the shadows; injures, and frequently flattens the appearance of the print. Too short a time produces weak and mottled prints, incapable of receiving a tone.

I have always worked my silver perfectly neutral and perfectly plain, using it in summer at 20 grains, in cold weather from 30 to 40 grains; now working 35 grains; floating both plain and albumen paper forty-five seconds; fuming ten minutes.

Whenever in warm weather my silver solution decomposes, I add a few drops of a strong solution of permanganate of potash, but this will fail to act if the solution has albumen or gelatine in it, and we then remove it by boiling.

Paper should be perfectly dry before fuming, and if damp after fuming, be dried before printing. The brilliancy of the whites is destroyed by being damp. As fuming increases the sensitiveness of the silver on the surface, the time should be in proportion to the strength of the solution. The treatment of the prints, after printing, determines the quality of tone. Ten minutes washing in running water I find sufficient, and will tone more brilliant and with better results than a longer washing, which produces flat results.

A toning bath should never be decidedly alkaline, as it produces measles, by dissolving the albumen surface.

Salt is used in the toning bath to precipitate any free nitrate, and prevent mealiness.

The kind of alkali used in combination with the gold, determines the tone.

For sepia or brown effects, the acetate of soda or citrate of soda baths are generally used.

For blue or purple tones bicarbonate of soda, borax, lime, chalk, are used. But it will be seen by the samples shown, that but little difference can be seen between any, as by careful manipulation the same tone can be produced by all. After toning, the prints should be kept wet until fixed.

The strength of the hypo solution determines the time they should be kept in. I use two ounces to the quart, and time twenty minutes to thirty. I prefer placing the prints in the solution face uppermost, dashing the solution over the surface, then reversing and changing several times before removal for final washing.

We always dry our prints spontaneously, and I would here add for the benefit of all, that prints that dry too blue, may be re-

duced in tone by steeping in boiling water, as will be seen by the sample on the card of trial prints.

Tests for the Purity of Photographic Chemicals.

No. I.

BY PROF. J. TOWLER, M.D.

IN the present advanced condition of photography it becomes important for the photographer to know how to test his chemicals for impurities; for such exist, more or less, either accidentally or intentionally in many of the chemical ingredients used in the photographic art. The aim of the present article, therefore, is to give the photographer the requisite instruction in chemistry, by means of which he can form an independent judgment as to the normal or abnormal condition of what he uses.

TESTS FOR NITRATE OF SILVER.

Nitrate of silver crystallizes in plates, which are quite peculiar and easily distinguished from other almost similar crystals, as for instance, from those of the iodide of cadmium. The crystals of nitrate of silver are very heavy. If crystals of quite a different shape from the tabular form are distinguished amongst the flat plates peculiar to nitrate of silver, there is a great probability that such crystals belong to some other substance; and by picking a few of these out by means of a pair of forceps, and submitting them to the following chemical test, you will easily be convinced of this fact.

TEST WITH HYDROCHLORIC ACID OR A SOLUBLE CHLORIDE.

This test is one of the best, for it shows the presence of silver very distinctly, and requires only one extra test in reality for its corroboration, but others may be added. This reagent, too, separates silver from many of its solutions completely in the form of the chloride of silver. Add, therefore, a drop or two of hydrochloric acid, or of a solution of common salt, to the solution of the supposed nitrate of silver (two or three grains of the salt in a drachm of pure water). If the salt is really that of nitrate of

silver, a slightly bluish-white precipitate is produced. Such a precipitate, and one that is almost similar in color is produced by this reagent, when it is added to a soluble lead salt (nitrate of lead, acetate of lead), as also when certain soluble chlorides are added to a solution of bichloride of mercury. It is therefore necessary to determine by a second test, whether the precipitate in question is chloride of silver, chloride of lead, or chloride of mercury. As I said before, one single test is capable of doing this, namely: pour the liquid off from the settled precipitate, add water to the latter, shake the mixture well together, and then let the precipitate again settle to the bottom. Again pour off the supernatant liquid, and finally eject the moist precipitate into a white porcelain evaporating-dish, and expose the contents for a few minutes to the direct rays of the sun. By this proceeding chloride of silver changes color, and gradually assumes a lavender hue. Chloride of lead and chloride of mercury are not visibly affected by this treatment, as regards color. Hence this test is decisive as to the presence of nitrate of silver; but, naturally, it does not prove that there is, or is not either chloride of lead, or chloride of mercury, either one or both, precipitated at the same time with the chloride of silver. To determine the presence of chloride of lead in the mixed chlorides, the latter are boiled in rain or distilled water, by which the chloride of lead is dissolved; the boiling hot solution is separated from the insoluble residue by filtration or by decantation; and, on cooling, the chloride of lead again separates in brilliant crystals.

The presence of chloride of mercury is determined by adding to the two remaining chlorides a little ammonia, which easily dissolves the chloride of silver, but which turns the chloride of mercury black, or of a gray black.

Numerous other tests might be employed, but these will be found, I think, quite sufficient to determine the presence of these three metals when combined or mixed as nitrates, and precipitated as chlorides.

But nitrate of silver is sometimes adulterated with nitrate of ammonia, which really does no injury, if the salt is used

simply for photographic printing on paper; but such an adulteration is an injury to the purse, and so far a fraud, because you have to pay for nitrate of ammonia the same price as for nitrate of silver.

TEST FOR NITRATE OF AMMONIA MIXED WITH NITRATE OF SILVER.

Take a few grains of nitrate of silver and rub this salt intimately together in a mortar, with a little quicklime and a drop or two of water; if there is any ammoniacal salt present, the smell of ammonia will at once be evolved by this operation.

In order to ascertain the amount of nitrate of ammonia present we proceed in the following manner: weigh out, for instance, twenty grains of the salt, in question, and heat it by means of a spirit-lamp in a porcelain crucible (or weigh the crucible and the salt together); then, as soon as the salt melts, white fumes will be evolved, if there is any adulteration with nitrate of ammonia. Continue the heat gently until no more white fumes pass off, let the crucible cool completely, and then finally again weigh the crucible and its contents; the difference in the two weights determines the amount of the nitrate of ammonia which had been mixed with the nitrate of silver.

But it may be that either the nitrate of soda, or the nitrate of potassa may be the adulterating ingredient; and as neither substance is volatilized by heat, we have to show their presence, and effect their separation in another way. Now we know that neither of these salts is precipitated by hydrochloric acid; therefore, add hydrochloric acid to a solution of the nitrate of silver under consideration as long as a white precipitate is thereby produced; afterwards separate the liquid portion from the deposit by filtration. This liquid portion contains the adulterating ingredient, be it either nitrate of soda or nitrate of potassa. Now evaporate the fluid to dryness and divide the residue, if there is any, into two parts. Dissolve one part in a *very small* quantity of water, and divide the solution into two parts. To one of these add a drop or two of an alcoholic solution of bichloride of platinum, which will produce a yellow *crystalline* pre-

precipitate of the double chloride of platinum and potassium, if the substance in the solution is nitrate of potassa. Add to the other part of the solution a few drops of an alcoholic solution of carbazotic acid, which will produce also a yellow crystalline precipitate if a salt of potassa is present. These two reactions will fail, if the adulterating material is a salt of soda.

Furthermore we may test for the presence of a soda salt by using the portion of the dried deposit and placing it on a piece of burning charcoal; if soda is present, and especially the nitrate of soda, the salt will evolve a bright yellow flame, and decrepitate. If, however, the salt were pure nitrate of potassa, the flame would be of a light purple or rose color.

Again, let us suppose that no deposit was left after evaporating the fluid, originally obtained by filtration, to dryness; this circumstance would indicate, if ammonia had already been tested for and found wanting, that the nitrate of silver under examination was pure from all metallic or basic compounds.

To test the solution of the nitrate of silver in question for any free acid, which ought not to be present, we use blue litmus paper, which turns red; if the color is not changed, there is no free acid. If, however, the color is changed to red, test for sulphuric acid by adding a drop or two of the solution of chloride of baryta to the solution of nitrate of silver; and, if a milkiness is produced, this indicates that sulphuric acid is present, and this indication is strengthened if, on addition of nitric acid, the milkiness still remains.

More probably nitric acid may be present, and this in very small quantity will scarcely be injurious.

Many other substances might be present, but there is not much probability of finding anything besides what we have tested for.

CORRESPONDENCE.

PHOTO LINGO; "GRIT VARNISH," ETC.

I WILL have to unburden my mind of one or two subjects, or it might possibly crack. First and foremost is the great passion or fashion of using foreign or outlandish names

and phrases in photographic literature, which should be gotten up for the untutored as well as professors. I often find myself bothering my brains trying to make out what is meant by such lingo; for instance, I see in the *American Photobulbythehorn*, a formula for what is called a very good collodion, copied out of the *Photopheniokistoscope*, printed somewhere on the other side of the Alps, and reading something like this: Ether, 830 centimetres; alcohol, 1260 grammes; gun cotton, 400 litres; iodide of potassium, 16 metres, and bromide of ammonium, 8 kilometres. Now, Mr. Editor, this may not be verbatim, but it is lingo, ain't it? And why in the name of all that is plain, can't we have it plain United States, instead of all this foreign jargon, that no one can understand unless he be a French monkey? My second cause of complaint is found on the back of stereographs. For instance, I have a very fine collection of foreign stereos, and of course I am anxious to know what the subjects are; I turn over the pictures to find out, and read: "Fhiere des freis taates Baine's Menagere dar Sekretair gypoperanus serpentarius das bonte quagga equns burchelli." Now, as a matter of course, I know as much about the picture as if there had been no printing there at all. It seems to me it would be a great deal better if the publishers of stereographs intended for our market, would give us a history of the subject in get-at-able language.

My next subject that I wish to call your attention to, is retouching negatives. Whole chapters have been written on retouching, and processes given in such glowing language that one would almost come to the conclusion that the process would do it alone without even putting you to the trouble of holding the pencil. I have tried pretty much all published methods, but up to a recent date I was able to do very little in retouching that was satisfactory to myself, or to anybody else; but the last new dodge of putting "grit" in varnish, so as to give it a tooth, I think an excellent one. I have used the said "grit varnish" for some time, and the more I use it the more use I find for it, for instance, on copies or groups where some of the faces are not lit up as

well as the others, or dark hands on light dresses. I apply the grit varnish on the glass side, and all inequality is soon made right; in fact it has done more to teach me how to retouch than all other former processes. At first when I tried it I could do no more with it than with some other methods, because I tried it on the face of the negative, but after practicing on the back of negatives, where I could touch heavily and roughly, and still improve my prints greatly, I have got so that I can retouch on the face quite well, as the inclosed print will testify; but for all new beginners in retouching I would recommend them to commence on the back of the negative: there they will find, as I did, that it is easy to do, and it will give their prints a finish very much like the porcelain photographs or mezzotints; if any difference, it will be fully as soft and a great deal sharper, and will answer to a very great extent for retouching on the face. Now as I have been benefited by this method, I am anxious to let the "craft" know. You may publish this if you see proper.

I remain, yours truly,

THOMAS T. MAHAN.

PITTSBURG, PA.

LITTLE DROPS OF GOLD.

BY YOUNG CHLORIDE.

"*Splashes of Silver, by Old Argentum.*"—

This is the title given to what I suppose will be a regular thing in the *Photographic World*, and I hope it will, but I see danger ahead, if "Old Argentum," whoever he be, is allowed by our good-natured editor to "splash" about too much. "Splashes of silver" make ugly stains sometimes, and especially if they are contaminated with old, organic matter, as the "splashes" of my aged friend may sometimes be. Therefore, Mr. Editor, as a youngster, I claim the privilege of "setting up business" in a neighborly way in these pages, in order to keep my eye upon Uncle "Argentum," and presume to see that he does not taint the *World* too much with his "old foggy" notions. (I wonder if he is "old foggy?") He starts as if he had the right "nip" in him,

as the Dutchman says, and I only hope he may keep it up. If he don't, then this is a declaration of war between us, and if he over-prints I shall assuredly try to *tone him down*. I respect silvery locks, but *photography*—blessed art—must not be hampered by old-fashioned photographers. I hope we may get along amicably, and work together pleasantly.

The Photographic World.—What a clean, bright, business-like, live, promising Journal it is! Modesty forbids my telling you all I think of it, for you don't need it. Only let me say that for your enterprise and tact displayed, may you have a long list of subscribers and a fine advertising patronage, for the latter, I know, vastly helps you in securing the best of reading matter for "*we* 'uns." Push on, and you *will* succeed. You show, I must confess, a great deal of *faith* in photographers and their thirst for information, but I believe they will bear you up in it, so go on. Lead us ahead to success and we are yours to hold up your hands, even now,—"*In the beginning*," when one subscriber and one good word will be worth five, a few months hence. "*Photography abroad*" is very acceptable, and a department I always regretted your space in the *Photographer* compelled you to neglect. We want to know all that goes on abroad as well as at home. "*On Lenses, Diaphragms, and Focussing*," is another good article, and I impatiently await the rest of it. I am glad too that Mr. Simpson contributes his *Notes* to the *World* too. His writings are as precious to me as my good name, and I value all he says. I hope Dr. Vogel will be continued on the staff also. We cannot have too much of either of them. You hit the nail right on the head in inaugurating a series of papers on "*Photography for (us) Boys*." The true way to secure a temperance reform, and reform in general, we are told, is to begin with the *boys*, and I believe the future hope of photography is in the boys too. Get them interested; then apprentice them to the business as you wisely advocate in your "Table Talk," and my word for it, by the time I am twenty-five, the art will "*hum*." Work away at the boys. You are right. The *Skylight* article is one of the most practical I have seen for

a long time, and will be of immense use to us all. It had always been my impression that the beautiful "Berlin cartes" were made in a long studio, with plenty of diffused light, and rather slow, such as Fig. 1, and Dr. Vogel told me it was so when he was here. Mr. Browne is *always* good, and his "few items" will be remembered. You seem a little severe on poor Mr. Ritzler and his secret process, but the only way to clear the country of sellers of secrets is to expose them, and I am glad to see it done. It is every honest photographer's duty to do all he can to aid you in doing it too. "*Position and Composition*" promises to be a very valuable series of papers, such as we all need and continually thirst for. The "*Hypo Club*" is going to do good. There are several little dodges practiced on the profession which I hope will be "clubbed," and all photographers should keep the President well informed of such. "*The Magic Lantern*" articles, by Prof. Morton, are just what we want. Photography is now almost exclusively used for making lantern-slides, and it is important that photographers should be thoroughly posted on the lantern, and how to use it. I'll drop on this subject again. "*Table Talk*" is entertaining. We too seldom get the views of our editor on current topics, and I hope he is going to do better hereafter. "*All the World over*" is also full of good.

The Woodbury print of Mr. Childs is an admirable success, and I am rejoiced that Mr. Carbutt has such fine prospects before him. He deserves it. I was much interested in reading the biography of Mr. Childs. It makes such youngsters as I feel cheerful, and spurs us up to *work*. Who knows but I may be *President* some day of—the National Photographic Association? But I have dropped too long, and I must drop.

eclipse of the sun, which took place yesterday, the 22d of December. This phenomenon occurred successively in the south of Spain, Algiers, Tunis, Sicily, and Greece. England and Italy, following the example of the United States, fitted out expeditions for the scientific investigation of this eclipse, and on the 8th of December I joined the English expedition for Sicily. A journey in midwinter, with the thermometer at 8° Reaumur, is not very attractive, as the æsthetic enjoyment of a winter landscape is overbalanced by the physical discomfort caused by the cold. On our railways, heated cars are the exception; but then our destination was Italy, and after crossing the Alps, when we reached Verona snow and ice disappeared, and we greeted the balmy air of the south. I met the members of the English expedition at Munich; it consisted of seventeen persons, seven for spectral observation, among them Lockyer, the president of the whole expedition, and also Roscoe; four worked with the polariscope, two were to sketch the corona, and three others, Mr. Fryer, Mr. Brothers, and myself, were to direct our principal attention to the obtaining of photographs of the corona; finally, there were two more members for keeping time and taking general observations. You will see that we paid particular attention to the corona. Less weight was this time laid on the protuberances, as they have been so thoroughly investigated by spectral analysis, and can now be seen every day, so that an eclipse is no longer necessary for their observation.

Messrs. Brothers and Fryer were provided with an astronomical telescope, to which a camera was attached. I took only two cameras with me, and a heliostat, which was driven by clockwork. The mirror which followed the sun turned in such a manner that the rays were always thrown exactly in the same direction. The work allotted to me was to obtain, during the short time of the totality, as many negatives of the corona as possible. I was provided with an aplannatic by Steinheil, the opening of which is equal to 1-7th of the focus. You will remember that Whipple took a beautiful negative of the corona in 40 seconds with a telescope, the opening of

THE TOTAL ECLIPSE IN ITALY.

SCARCELY returned from the United States, with the delightful recollections of my trip still fresh in my memory, a new undertaking called me again away from home, namely, the observation of the total

which was 1-15. As the intensity of the light of the instruments is as the square of the relative opening, it follows that the Steinheil instrument had $4\frac{1}{2}$ times greater intensity than the one used by Whipple, and I could perhaps take a picture of the corona in nine seconds. As the mirror absorbed, however, 50 per cent. of light, I concluded to increase the time of exposure to 20 seconds, which would enable me to take three pictures at least. The main object was to ascertain if the corona actually changes its form so rapidly as stated by Professor Gould. I intended, further, to ascertain if the light of the corona is polarized or not; for this purpose a double picture, by means of a crystal of Iceland spar, was to be taken, which would solve the problem at once.

Thus provided we traversed Italy. Unfortunately, our time was very short; only in Verona and Rome a day of rest was taken, which gave us an opportunity to see, although only in the outlines, the splendors of the old world, and the art treasures of Italy. In Naples, which is called the earthly paradise, the weather was unfavorable. Here we took the English steamer *Psyche*, which carried us to Catania. I met there Mr. Einbeck, from St. Louis; he brought me greetings from my friend Benecke. The next morning we reached Faro de Messina. Steering between Scylla and Charybdis (both harmless whirlpools), we steamed along the coast of Sicily. The scenery was the most magnificent which it ever has been my good fortune to behold; village follows upon village, all showing still the traces of a great, although bloody past. The blue sea, the peculiarly profiled promontories of the coast, and the mighty, snow-clad peak of *Ætna*, all combine to make a picture which will overwhelm even the most objective observer. In the full enjoyment of all these beauties we met with an unexpected mishap. Our vessel struck a rock in the neighborhood of Cape Mulins, 7 miles north of Catania. This is the place which the legends of mythology designate as the abode of the Cyclops. Our vessel could not be saved; our party, however, with all their baggage, were safely landed on a lava rock, and afterwards we were rowed in boats to

Catania. Here I met, to my great joy, old acquaintances from the United States: Mr. Chapman, from New York; Prof. Watson, from Ann Arbor College; also, Professors Peters and Pieris, and General Abbott, from Washington. Mr. Chapman, in company with Messrs. Fry and Burges, had made himself comfortable, in the garden of the large Benedictine convent, where we picked oranges from the trees. They had pitched their tent surmounted by the star-spangled banner. Here was the telescope and dark-room, everything arranged so nicely that it was a real pleasure to work in it, and already a number of rare pictures had been taken. We learned, in Catania, that the Italians had sent a photographic expedition to Fort Augusta, south of Catania. This circumstance induced Lockyer to divide our party, and to send one part, consisting of the photographers, Mr. Brothers and Mr. Fryer, to Syracuse; another part was sent to Fort Augusta; a third party, to which I belonged, should take a position to the north from here, to test the question, whether the corona is of atmospheric origin. It was important to select an elevated standpoint, where evidently the atmospheric influences are much less marked.

Such an elevated position Mount *Ætna* afforded. It was, of course, impossible to reach, at this advanced season of the year, the summit, 10,200 feet above the level of the sea; but a less elevated position was of much interest. Roscoe, Harris, Bowen, Darwin, General Abbott, and myself, started for the ascent. We were joined by Professor Silvester, who intended to take physical observations. I was the only photographer of the expedition. I expressed, as an objection to *Ætna*, the short duration of the eclipse; but I hoped, on the other hand, that the rarefied atmosphere would admit of shorter exposure.

The weather was, during the first days of our stay here, very promising. We had an elegant view of *Ætna*, the sea, the city, and the surrounding country, and we hoped for the best. One day before the eclipse, on the 21st of December, we left Catania, and rode to Nicolosi, the first station ascending the mountain. Professors Peters and Einbeck, your fellow-countrymen, re-

remained here, intending to observe the phenomenon from Monte Rosso. This hill or mountain is a small crater, like hundreds of others which cover the slopes of *Ætna*. We, however, went up higher, our baggage was carried by mules, and the ascent was rather tedious—first over volcanic rocks, next over a rugged lava stream, more interesting to the eye than to the feet, and finally the road leads upwards, between numerous craters scattered over the mountains. Most of these are now extinct; in some of them even grain fields are cultivated by the farmer, only the summit indicates, by the now gray, now white smoke, the activity of the subterranean fires. Unfortunately, with the ascent the weather changed for the worse; a fierce north wind set in, which gradually increased to a gale. The thermometer sank lower and lower, and heavy clouds clustered around the mountains. Thus we traversed the so-called wooded region of *Ætna*, consisting of numberless dwarfed and crippled trees. Now and then we followed the bed of old lava streams, which had cooled in large blocks, similar to the ice of Niagara in winter; and finally we reached, rather frozen, the stone cabin of a forester, our destination. Here, 4800 feet above the level of the Mediterranean, we halted and established our headquarters. This cottage, called the Casa Ferentina, afforded a splendid view of part of Sicily, which, however, was soon veiled by the dark and murky atmosphere. Night approached, the weather did not get any better, but rather worse, our house trembled and shook, and sometimes it seemed as if not only the wind but also subterranean powers were at work, for we slept upon a volcano. After a very frugal supper, which Professor Roscoe improved by self-made chocolate, we gathered around the bright fire on the hearth, and finally tried to find rest on the layer of straw which had been prepared for us. The storm howled the whole night, the rain changed to snow, only a few of us were blessed with sleep, and excited by our snoring the ire of those that could not find rest.

On the next morning Professor Roscoe observed the barometer. Since the previous evening it had fallen 7.9 millimetres, which

made us feel quite uneasy; it seemed as if the weather would make all our exertions fruitless. When we opened the door of our cabin, a winter landscape greeted our view, and heavy clouds obscured the sun; meanwhile our guides, who had spent the night at Nicolosi, returned. They reported fair weather below; this made us consider the propriety of giving up our station and going back to Nicolosi. Suddenly, about nine o'clock, the sun burst forth; the strong wind chased away the clouds, and we saw snow-covered *Ætna* up to its summit. We gathered fresh courage; our instruments were placed in position. I took at once several pictures of the observers and the surrounding landscape, and found the light of astonishing chemical intensity; everything looked promising. An accident, however, happened to my excellent "Philadelphia box," for which I am indebted to the Scovill Manufacturing Company. I had given strict orders to one of the guides to watch it, as the high winds gave me uneasiness. The fellow, however, preferred to talk to his comrades, and when I returned from my tent, where I had gone to develop a plate, camera and guide had disappeared; the former I found at the bottom of a crevice. Fortunately the fresh snow had broken the force of the fall; the objectives were uninjured, and the damage to the box was trifling.

Everything was now got ready for the observation, and we awaited the approaching eclipse. First contact took place at fifteen minutes past twelve o'clock, noon; shortly afterwards, however, the north wind brought fresh clouds, which increased continually. I had two cameras in position for the observation, and succeeded in getting two plates ten minutes before totality. In the meantime, however, the whole sky was covered by clouds and our hopes were disappointed. A terrific hail storm rattled down upon us, and compelled us to take refuge in the cabin with our more delicate instruments. The totality was now near at hand; it became gradually darker. Five minutes before totality I directed my camera towards the clouds covering the sun and exposed a plate for thirty seconds. One minute before totality I repeated the ex-

periment with the second third of the plate, and the remaining third was exposed for sixty seconds during totality. The disappearance of the light was indicated by a leaden hue, but still it was strong enough to enable me to see one of the observers who stood at a distance of one hundred paces. I could also read the figures on my watch. After totality it became suddenly light again. A strange red glare surrounded us at first, which gradually changed into the usual gray light of a foggy day.

The phenomenon, for the observation of which we had come for hundreds, and some of us for thousands, of miles, and for which laborious preparations had been made, involving a sacrifice of much time and money, was irrevocably lost to us. Amidst the falling hail and howling wind we packed our instruments. Twenty minutes after totality the clouds were dispersed and the sun shone bright and clear, as if to mock us. I developed the plates which had been exposed to the clouds; the part taken five minutes before totality showed the chemical effects of light, that taken one minute before indicated the actinism of the light in a lesser degree, while the part which had been exposed during totality did not show a trace of chemical action. It is probable, however, that even during totality some of the above effects are produced, as the darkness obscures only a part of the sky and the remainder should certainly reflect a light possessing actinic rays.

We had to submit to our own misfortunes, and we were grieved to think that other observers had to suffer perhaps as much from the inclement weather as ourselves, as we saw the clouds float in the direction of Catania and Augusta. Shortly after the totality was over, General Abbott, who had occupied a position higher up the mountain, joined us, and reported the same want of success. When twilight set in we returned to Nicolosi, where we found Peters and Einbeck, who also had seen almost nothing. In Catania the weather had been equally unfavorable, only during the last four seconds of totality the eclipse became visible, and photographers from your country hurriedly exposed a plate by means of a camera attached to a telescope having much

light. Even the observers at Fort Augusta complained of their ill luck. Only from Syracuse we received favorable news; Mr. Brothers had taken five pictures of the eclipse, two of which were of the corona. Professors Pierce and Watson appeared to have had the most favorable location, at the villa of the Marquis Guiliana. They saw the corona very distinctly, determined its outlines and the lines of the spectrum, and it is now positively proved that the corona belongs to the atmosphere of the sun. Watson observed the corona as almost circular, having a height of about seven minutes. I will not, however, anticipate his interesting report, which will be given to you in due time. Many protuberances have been seen during the eclipse. We hope that the other observers have been better favored than our unlucky party.

Yours, truly,

DR. H. VOGEL.

CATANIA, Dec. 23, 1870.

RELATION OF BACKGROUNDS TO SUBJECTS.

BY A. R. CRIFIELD.

IT seems that everything possible has been said upon the various and often perplexing topics of lenses, dark-rooms, position, toning, and other important subjects, but there appears to be a corner unfilled in writing up the details of our art. The heading of this article, if you will look for a moment, will put you in a train of thought you may or may not have ruminated upon before. There is a relation that every subject has to the background where scenic effect is attempted. There are those who turn off pictures to their customers, of every grade of condition in life, with the same scenes and "accessories," so called. This will be forcibly brought to mind if you will observe the pretty "scenic" effect of specimens in hundreds of galleries, or take up an "album" and turn its pages. There are many exceptions, of course, but I speak of the great body of artists using "scenes and accessories," who are all striving with honorable competition to give a fine and telling appearance to their work, by pretty scenes,

curtains, urns, piazzas, marble walls, &c. Artists know that their customers, as a whole, are a motley crew—rich, poor, handsome, homely, and indifferent. It is a glorious thing for us that the high and low, together with every intermediate grade, want the “shadow caught.” The disposition to exchange “likenesses” happily prevails in the hearts of the aristocratic and educated as in those of the uncouth and unlettered. Now comes one of the latter into your gallery. You have got nice scenes, pretty furniture, columns on your background, and everything looks as though your customers were posed in some marble hall. Yes, the famous Montezumas would pale and sicken beside them. This subject, whose “money is as good (hic!) as any man’s,” is ready. His toilet is made! His picture is to send off to a dear old friend. He is with some difficulty placed; after much tramping and heavy stalking around he is got into position. You draw the slide. *He was still!* You tell him so, bragging on his nerves, and say to him, *How natural!* Here is the picture.

ize that he is out of place amid so much finery. He does not live and move among such an array of aristocratic decorations. If you desire to place him in a position suitable to his style and condition in life, you had better fill up and make surroundings of rudeness, and a pig, horse, and bullock. It would then be recognized by his “dear old friend,” who is to be charmed by receiving the shadow of that “face divine.” It is too expensive to furnish a scene for every character, and, of course, one scene must do all. How shall I work it? asks a scenic brother. I will tell you. It is impossible to introduce a “pretty” background for each particular case. The difficulty *can* be met and vanquished into *thin ether*, by using a thin ether background. Every human being stands in living day and has the thin ether of heaven for a background against which to view him. *Imitate it!* It is the only ground for *all*. It cannot be improved. A plain, spotless, even background is the sum of excellence. I long to excel in it. One good, plain background, disrobed of castles, piazzas, columns, curtains, and what not, well worked, will suit every condition in life.

PHOTOGRAPHIC DIALOGUES.

(SEQUEL TO “ONE HUNDRED DAYS
IN A FOG.”)

BY ELBERT ANDERSON,

Operator Kurtz's Gallery, 872 Broadway.

M. Well, as we concluded to review our “one hundred days in a fog,” lets get in. From the first to the fifth day appears to be taken up with the question of *streaks*.

A. Streaks, in the direction of the *dip*, are evidently caused by manipulation, for if you turn the plate in the other direction the streaks appear in that direction. It is no fault of the bath nor the collodion; it is *your* fault. For if the collodion be not perfectly set, and the plate immersed *quickly* in

the bath, the solution rising rapidly on the surface of the plate will inevitably cause them, especially if the plate be pumped up and down continually in a straight line.



Look at him; scan him, and read his character. You realize his position in life at once. Study the relation between the subject and the background; you will real-

Indeed, it would be singular if such were not the case. Let your collodion set well, immerse your plate *slowly and steadily* without the slightest hesitation, and believe me, you will never see another streak from *this* cause.

M. Why, that alone is worth the price of admission; thanks. From the fifth to the thirteenth day relates to acid or no acid, that's the question. Let us go over this *acid-iously*.

A. In the question of *choice* of acids, nitric or acetic, I believe there to be little or none. I use *nitric*, though many of my betters use acetic, claiming that the negative is more intense with the latter; if so, this is an additional reason for me to reject it. Perhaps some gentleman will kindly enlighten us, through "Sphinx."

M. "*Aliquis*," on the fourth day, says: "Even when first made, no acid should be added to the bath."

A. His meaning is, undoubtedly, that the bath may be sufficiently acid, from acidity derived from the silver salt, or old collodion, used to iodize it. "If the bath is alkaline, no picture at all can be developed; and if organic matter is present, uncorrected by acid, the image will be indistinct and foggy, by a reduction of silver independent of that caused by light." (Devine, page 33.)

If your bath is a small one, $\frac{1}{2}$ to 1 gallon solution, coat a plate twice with collodion, and leave it in the bath all night. (I formerly used small baths, and invariably iodized them in this way with perfect success.) Next morning filter it, and, as a general thing, it will require no further iodizing or acidifying, *all authorities to the contrary notwithstanding*. Why not, pray? Devine says: "Coat a plate, then expose, develop, and fix; if the picture is clear in the shadows, there is acid sufficient; if foggy, drop in more acid, and try again."

M. Aye, drop in more acid, what kind?

A. "If the picture is clear in the shadows there is acid sufficient." Now I cannot well conceive, that in this case the acid can be any other than *nitric*, from the silver, and a trace from the collodion, for where is the *acetic* acid to come from? Assuming it,

then, to be *nitric* (though I may be wrong), it appears to be proper to use the same.

Devine says: "If foggy, drop in more acid." Now stop a bit before you do anything of the sort. If your plate be foggy wash it well under the tap, and examine the *nature of the fog*. Rub the "fog" gently with a piece of cotton, or with the ball of the third finger; if the "fog" fail to rub off, without destroying the collodion film beneath, *the fault is not with the bath at all*, for it may have been caused by *light, dirty plate, &c., &c.*, and generally appears in irregular patches. But if the fog be a universal layer, covering the *lights* as well as the shadows, and forming no part of the film itself, and which rubs off by gentle rubbing, leaving the picture unharmed beneath, the collodion acid, and a proper developer, then, and not until then, drop in a little more acid, and make another trial. Dip a plate, and pour on the developer, without exposing to light; after 30 or 40 seconds wash it under the tap and fix. Now notice the appearance of the plate. If there be *one spot* (be it ever so small) that clears in the hypo, your chemicals are not in fault. Suppose, now, the shadows are clear, and the bath all right, *from this moment henceforth* don't "*doctor*" it. It will never require any more acid, and if you wish to keep it in order—

M. Aye, marry I do. Tell me *what* to do.

A. I will—LET IT ALONE. A bath of three gallons will carry from 500 to 600 4-4 plates without becoming disordered; I doubt, with proper care, if it will need filtering in cool weather. In hot weather the chemicals rapidly change their natures, and difficulties arise which are unknown in low temperature. Now excuse me for repeating, that your bath *once* in order, with care and cleanliness, will never go out of order except by reason of pinholes (caused by excess of iodide), or by organic matter. The remedy, in these cases, is deferred for the present.

M. We are now at the thirteenth day, and from that time to the twentieth appears to be a question of acids.

A. I am disposed to make *my* bath decidedly acid.

M. Does not this impair its sensitiveness?

A. My experience has taught me, that this is a point that has been somewhat exaggerated. You may rest assured, that when your bath is so very acid as to interfere with its sensitiveness to any material extent, that it has been sadly abused; and I can only account for such a state of things, by supposing some one has upset a bottle of nitric acid in the solution. If sufficiently acid, in the first place, give yourself no further concern as to its acquiring too much acidity through the medium of any fair sample of collodion.

M. The 19th, 20th, 21st, and 22d days are rather *amusing* than otherwise. Thus, the 19th and 21st say: Too much acid gives hard and strong negatives; and the 20th and 22d say: Too much acid *never* yields intense negatives.

A. It is very consoling—very consoling, indeed, Mr. Marshall, to learn here that the *collodions* and the *developers* have really nothing to do with the harshness and intensity of the negative; nor the *light* anything to do with contrasts; it depends, of course, solely upon the acidity of the bath (!) Nonsense!

M. The 23d and 24th days appear to differ slightly as to the effect of acid, or rather as to the object of its presence in the solution.

A. My views on this subject you already know.

M. I notice that a certain gentleman (Silver Sunbeam, page 332) says, on the 21st day: "Excess of contrast" (which is, of course, inartistic and undesirable) is caused by "too much acid in the bath;" and yet, on the 25th day, the same gentleman (Towler's Almanac, 1866) recommends 2 *drachms* of pure glacial acetic acid in only one half gallon silver solution; and such is life. What am I to do about the 26th and 27th days?

A. Make the collodion properly, in the first place, and don't "doctor" it. If the intensity is caused by the collodion being too thick, thin it with *ether* alone, and not with equal parts of ether and alcohol, as frequently recommended. Too much ether may be detected by the zigzag lines alluded to on the 28th, 29th, and 30th days.

M. Good. Now come the 32d, 33d, 34th, 35th, 36th days. Filter or not filter?

(To be continued.)

NOTES IN AND OUT OF THE STUDIO.

BY G. WHARTON SIMPSON, M.A., F.S.A.

Purifying Pyroxyline.—In the letter of our esteemed friend, Dr. Vogel, in your December issue, I notice that referring to the experiments of Camuset on the partial solubility of pyroxyline in water, he contemplates a practical application of the idea to the purification of pyroxyline. Assuming that collodion itself should be a neutral body, simply serving as a convenient vehicle for the sensitive salts of silver, it is clear that if it contain substances soluble in water, these may interfere seriously with the silver salts present in the excited plate, and that such soluble substances must contaminate the nitrate bath, possibly injuriously, by being gradually dissolved by the action of the bath. It is not improbable that some of the inexplicable derangements of the nitrate bath which sometimes perplex the photographer, may be due to such a cause. Dr. Vogel proposes to obtain pyroxyline, free from soluble impurities, by precipitating it by water, in which the obnoxious substances would be left in solution. I refer to this for the purpose of recalling the record of some important experiments, in the same direction, made about twelve or thirteen years ago by M. de la Haye, who suggested a plan for obtaining very pure collodion on somewhat analogous principles. He stated that on dissolving four per cent. of good gun-cotton in ether of .847 specific gravity, and then leaving it to repose for three weeks, it was found to have divided itself into three strata of different densities, and possessing different qualities. The upper layer was clear and limpid, like albumen; the next layer thick and glutinous; consisting partially of fibre and woollen, but not dissolved; and the lowest of partially dissolved and undissolved cotton, mixed with various impurities. The two upper portions of fluid, M. de la Haye states, "must be poured off carefully, and one per cent. of pyroxyline added, when a

rather curious phenomenon presents itself. The ether, finding new gun-cotton to dissolve, abandons such fibres as it had only swelled and held in suspension; hence it results that the precipitate of this second operation is proportionately greater than in the first, and slightly different in its nature, being more dense and felt-like. It is probable that among these fibres a portion may be changing to oxalic acid, or, at all events, have commenced this transformation. It is one of ether by ten of water, or to a certain combination of the two bodies; there is the fact, and the first hypothesis is the simplest explanation of it, though it does not quite account for the increase of density being considerably more than a tenth. A second phenomenon is also worthy of notice: the layer of water is acid, while the collodion is absolutely neutral; the water evidently deprives the collodion of its soluble salts, and drags all the remaining impurities to the bottom. The water gives to the ether a perfect neutrality, and relieves it of the acetic and nitric acids, &c., which it may contain; however, under the influence of various circumstances, the deposits of old collodion, being greatly concentrated, when treated with potash, yield perfectly defined crystals of oxalate of potash. After standing fifteen days the fluid must be decanted, and mixed with a certain quantity of distilled water, to wash the collodion. The mixture must be long and well shaken, and then left to subside for a month or six weeks. Two layers are formed, and a singular fact presents itself: the collodion is thicker than before. This may be due to the absorption of one part, and imparts to it new qualities. Collodion prepared in this manner, if allowed to stand for six months, acquires a wonderful limpidity, and forms no deposit. Age perfects it. It would seem as if the pure elements of which it is composed united together more intimately."

That a method of purifying pyroxyline from soluble impurities would be a great boon to the photographer there can be no doubt. Unfortunately the plan of M. de la Haye was complex, troublesome, and costly, and was not, on repetition, found to be certain. In my own attempts to repeat the

experiment at the time, I was unable to verify the first statement in the case of M. de la Haye; the collodion did not separate into three layers, and I proceeded no further. If, however, a cheap, simple, and certain plan of purifying pyroxyline from the inevitable by-products which accompany its manufacture, and are in greater or less degree injurious, it would undoubtedly be a boon to the photographer. If precipitation from its solvents by water answer the purpose, the chief cost would be the labor involved, as the ether and alcohol could be redistilled for repeated use.

New Solvents for Pyroxyline.—Whilst referring to the subject of pyroxyline, I may mention some solvents for this class of bodies which have recently been discovered. A company exists in this country for the manufacture of a patent material called *xyloite*. It resembles collodion in constitution, and the articles manufactured from it may vary from the flexibility of morocco leather to the hardness of ivory or stone. A low form of pyroxyline, or xyloidine, is dissolved in a variety of the known ethereal solvents; but the novelty to which I referred, as a solvent, consists of fixed vegetable oil and camphor. For instance, castor-oil is heated to about 300° Fah.; and then to 100 parts 50 parts of camphor are added. Whilst this mixture is hot it readily becomes pyroxyline, and a thick plastic paste being formed, it may be moulded to any form. Photographic dishes and other vessels are formed of it; water-proof coverings for tents; semi-transparent adiactinic tissue, to serve as a substitute for yellow glass, and various other photographic adjuncts are manufactured from this substance.

Reproducing Negatives.—The subject of reproducing negatives has excited some interest here of late. Of course a successful means of multiplying negatives must at all times be a matter of the deepest interest to photographers. If a certain means of obtaining a negative as good as the original were commonly known, very few photographers would neglect it before intrusting a valuable negative to the risks of the printing-frame, whilst for printing large numbers the repetition of the negative would be an invaluable aid. Although at first glance

there should be no theoretical difficulty in reproducing a negative perfectly, in practice the reproduction is too commonly much inferior to the original; and if in gradation, delicacy, and vigor, it approach perfection, there is generally one point which distinguishes the copy most offensively; I mean the line of light between blacks and lighter tones, caused by reflection from the back of the plate. One of my correspondents, Mr. A. L. Henderson, a skilful practical photographer, has devoted much attention to this subject, and has so far overcome the difficulties that he can produce a negative from a negative in which no difference of any kind shall be perceptible. He says:

"In taking a negative where velvet comes in contrast with whites, what a halo will be round the lights surrounding the velvet! If you stop the lenses down so that the exposure will be considerably lengthened you will then perceive that the halation increases in consequence. You will doubtless ask yourself how can this halo be prevented? Many suggestions have been offered, such as coating the back of the sensitive plate with a non-actinic varnish or pigment, so that the reflection from the back surface would be lessened. This has been found an improvement, but not a perfect cure. In thoroughly preventing halation by my method, difficulties may arise in the minds of readers that might prevent them trying the remedy, but the difficulties are purely imaginary. The whole success lies in taking the negative and transparency on an opaque or non-actinic surface, of course bearing in mind the usual conditions as to density, &c. After the negative or transparency is fixed (and before drying), place it in a porcelain tray with water one pint, of sulphuric acid twenty or thirty drops; in a few seconds the film will begin to detach itself from the glass, when a slight movement of the tray will complete the detachment. All that is now required is to withdraw the opaque glass and substitute plain instead, pour off the water or lift the film on the new support, wash it in water, and allow to dry spontaneously. Pyrogallic acid is much the best as a developer for the transparency and subsequent negative, as the precipitate of silver is much finer; the advantage of pyro

as a developer is of more consequence when an enlarged negative is required. It will be found that to take the transparency on non-actinic glass is a great improvement, even where the negative has been taken in the ordinary way."

KENYON'S ADJUSTABLE WOODEN DIPPER.

WHAT seems to us to be one of the most practical things lately made known to photographers, is an adjustable wooden dipper, the invention of Mr. W. Kenyon, Crawfordsville, Indiana. The cut will explain. The parts are all hickory wood, except the centre band, which is a mere brace, and the upper band, which also serves as a brace. To use it, press the upper parts or handle together with the hand; that causes the forks to fly apart, or open to receive the plate on the rests. As the forks may thus be made to separate more or less, one dipper will answer for several sizes of plates. When the hand releases its pressure, the forks press the plate between them, and there is an end to the dropping of the plate, for it is immovable. In that position it can be dipped, and one dipper should be kept for that work. After exposure the plate may be placed in another dipper, and thus held, be developed, washed, and, if you desire, fixed, without moving it.

Made as they are of light wood, they are very handy, and there is nothing about them to contaminate the bath, a coat of shellac or lard rendering them waterproof. With all the dodges for dippers, we have seen nothing that meets the wants so completely as this. Mr. Kenyon has applied for a patent, but he will manufacture them himself, and sell them at a moderate rate.





Contributors to Sphynx will please write on one side of the paper only. Every reader of the *Photographer* is welcome to ask or answer queries, and we hope it will be done by many more. Give us your ideas freely.—ED.

Answers to January Queries.

1. Pulverize well in your mortar and then dissolve in water; the very smallest possible quantity. Alcohol may be used with water where water alone fails.

2. Get good and real benzole, and you ought to have no trouble. Pound your gum up into small pieces first.—SPHYNX.

3. White gum shellac and alcohol enough to make the varnish the proper thickness. See Mr. Trask's article on Ferrotypes, p. 68, *Mosaics*, 1871.—A LEARNER.

4. Weak silver solution, too strong silvering, damp paper, too strong or too weak a toning bath, and a dozen other things, make "specks on the prints." What are yours like? Read "*Inside*," *Mosaics*, 1871; it will give you the "inside" track.

5. Poor, perhaps old and insensitive cotton.—LIVINGSTONE.

6. The fact that the coating you mention can be removed by brushing, shows it to be a surface precipitate or fog, caused by impurity of the chemicals. Probably the bath, although an insufficient amount of acid in the developer will produce nearly the same effect. To cleanse the bath, I use permanganate of potash. Add enough of a strong solution to give the bath a deep red color (an excess does no harm); shake and let stand a short time, then filter through several thicknesses of paper and it is right. I find no difficulty in working this method, and it is sure; with me at least. I am now

using two baths that have undergone this process and they both work finely. Some years ago I was troubled with a precipitate of chloride of silver on the picture, caused by using acetic acid adulterated with muriatic acid. To test acetic acid for muriatic, drop in a grain of nitrate of silver. If impure, a chloride will be formed.—B. B.

7. Neither, but more care in developing. All "new 'uns" are afflicted as you are. Pour on your developer with one motion of the hand *all over the plate at once*, and keep still and let the developer do its work, only; don't let it do *too much*. EUROS.

9. In taking a stereo portrait you should have the lenses not more than three inches apart; but for a view, the nearest object to be included in the picture when mounted, not being nearer the camera than fifty feet, the lenses may be separated from three to four inches.

10. The centre of each picture when mounted should not exceed three inches, whether the lenses be three or four inches apart in taking the view.—J. CARBUTT.

11. See article by J. Carbutt, in Jan. 1870, No., *Philadelphia Photographer*, p. 15. SPHYNX.

12. *Formula for Babies*.—Take good, fresh-made collodion, excited with $4\frac{1}{2}$ to 5 grs. iodide of ammonium and $2\frac{1}{2}$ grs. bromide of potassium. Use the bath as neutral as possible. Bring out your whole stock of patience and perseverance, and with an enthusiastic love of babies and a good light, there is seldom any trouble in catching the dear little creatures every time.—ROLAND VANWIEKE.

13. I use a two-thirds size C C H. quick worker, full opening, bright or fair weather. Bath 40 to 45 grs., new and faintly acid. Collodion, ether, and alcohol, equal parts; iodide of ammonium 5 grs., bromide of cadmium $2\frac{1}{2}$, negative cotton 6 to 8 grs. per oz. Developer, double sulphate of iron and ammonia from 15 to 20 grs., and acetic acid No. 8 from 1 to 2 oz. per oz. of developer, according to length of exposure of plate, &c. Should the negative require strengthening, redevelop with pyro and silver, or, which is sometimes better, with bichloride

of mercury; a weak solution, well washed from the plate, followed by a weak solution of iodide of potassium in water or diluted ammonia: 1 part ammonia to 7 of water. Temperature of bath and developer from 60° to 80°.—ALSACE.

QUERIES.

1. Please tell me how I can convert an old negative bath into a sensitive bath, for paper, so it will make good prints?

2. How can I mix a solution of acetate of soda for toning, so I can make a toning bath at any time. I mean, how much acetate of soda must I use to the oz. of water?

3. How can I get a purple tone?—ST. CLAIR ARTIST.

4. Is there any way of neutralizing acid ether so that it will work reasonably quick when made up in collodion?

5. Has the alkaline bath and collodion ever been successfully worked, and does it reduce the exposure any? Is it practical? JACK FROST.

6. What will keep water in a tank, in the dark-room where there is a stove, from smelling badly?—WELL.

7. What is the effect of acetate of lead in the nitrate bath?

8. What is the effect of nitrate of potash in the negative developer?

9. What is the effect and advantage of nitrate of ammonia in the positive bath?

10. Why does a thin stratum of albumen under porcelain collodion cause fading, as some are now claiming. I have always used it, and have some three or four years old as good as when first made.

J. HARRISON.

11. Why cannot I get the background of my vignettes white? They show a yellowness I cannot account for.

12. Do iodides and bromides lose any of their strength by being oxidized?

E. W. R.

READ our advertisement of "Books almost given away." Bargains for all.

MORGENEIER'S

Ground Surface Negative Varnish, and Book of Instructions.

WE have received from Mr. J. W. Morgeneier, Sheboygan, Wisconsin, a bottle of his new varnish for imparting a "ground" surface to negatives, and his "Book of Instructions" in retouching negative and positive photos. The author claims to have worked in the retouching of negatives and prints for a number of years, and his book seems to be written by one thoroughly acquainted with the art. Detailed instructions are given first how to retouch contact negatives. 1. The forehead; 2. The nose; 3. The eyes; 4. The cheeks; 5. The chin; 6. The mouth, and 7. The drapery; followed by directions for retouching solar and landscape negatives, for India-ink retouching on albumen paper, and for copying. Two photographs accompany the book, one from the negative before, and the other after it was retouched, which make it altogether a very useful and practical book.

The varnish made by Mr. Morgeneier imparts a very beautiful "ground" surface to the negative, which takes the pencil admirably, and seems to be all one could desire in such a varnish. It must be applied to the plate cold, and dry without heat. No other intensifier should be used than pyrogallie acid, and but little of that, as the varnish has a slightly intensifying effect upon the negative.

We have prevailed upon Mr. Morgeneier to manufacture his varnish for sale, so that all dealers can have it to supply their customers, rather than to sell the *process* for making it, as he at first proposed to do. His varnish is patented, and in order that others may not ignorantly infringe, we publish the following from his specifications:

"I compound two solutions, the following being the formula for their preparation:

No. 1.

Absolute Alcohol, . . .	2 $\frac{3}{4}$ ounces.
Gum Sandarac, . . .	$\frac{1}{2}$ ounce.
Turpentine, . . .	1 $\frac{1}{2}$ drachms.
Oil of Lavender, . . .	1 drachm.

No. 2.

Alcohol, . . .	5 $\frac{1}{2}$ drachms.
Ether, . . .	$\frac{1}{2}$ drachm.

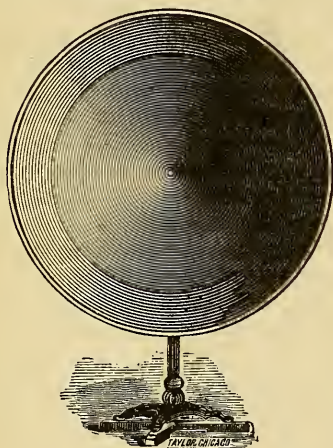
Gum Camphor, . . . 1½ drachms.
Rain Water, . . . 2½ "

Mix the two by shaking, and after standing a day it is ready for use.

For further particulars, please consult M. Morgeneier's advertisements.

BIGELOW'S REVOLVING BACKGROUND.

MR. L. G. BIGELOW, Grand Rapids, Mich., has also brought out a very useful novelty in the way of a background. We some months ago described a similar one, designed by Mr. C. W. Motes; but Mr. Bigelow manufactures his for sale in a su-



perior manner, he claims. He paints them *in oil*, and from the experiments we have made with one, we consider it a very desirable piece of machinery in the studio. The results are completely satisfactory. The color is so carefully graded from dark to light, that for bust and half-length pictures a plain background should not be used when one like these can be had. They are mounted on a circular frame with a shank in the centre, so they can be used on the post of any old head rest, (see Fig.) We have often spoken of the advantages of a graded background over a plain, even-tinted one, and no one who has tried them will go back to the old. Their use enables you to secure a charm in your pictures which your patrons will appreciate, though they may be mystified as

to how you do it. Mr. Bigelow has some excellent testimonials from excellent men, which he publishes in his advertisement.

GERMAN PHOTOGRAPHIC SOCIETY, NEW YORK.

THE first general meeting of this Society was held January 5th, at 28 Stanton Street. Vice-President O. Lewin in the chair.

Some resolutions of mere local importance were passed, after which Mr. Sladky exhibited some glass positives, made by Mr. Newton's collodio-chloride process. They were very fine in detail, and full of vigor.

Mr. Benecke, of St. Louis, had sent in a series of views, which were very much praised for their skilful execution. The most attractive was a panoramic view of the city of St. Louis, in six parts, with the utmost accuracy in regard to joining together. Several members regretted very much that Mr. Benecke did not state what objectives he had used for these views, as they thought this of great importance.

On motion, it was resolved to send the thanks of the Society to Mr. Benecke for this instructing and remarkable donation, and that it should be entered in the minutes.

The next topic was about negative varnish, which raised a great discussion. The members who devote their time to negative retouching, all expressed their opinion that there was no varnish in the market which possessed all the qualities required.

Mr. Nagel, of Hoboken, said he had experimented for several years in preparing a varnish that would satisfy every requirement, and that at some future meeting he would lay before the Society samples of his production for investigation, and that he would give his recipe for publication.

The receipts given by different members were: I. Gum Benzoe, 1 oz., 10 oz. Alcohol. II. Copal varnish as ordinarily sold mixed with two parts of benzine.

Another, dissolve melted amber in benzine to the thickness required.

The negative needs not much warming before coating. It gives a hard surface, and the heat to which our negatives are sometimes exposed during printing has no effect on this varnish.

One member was lately very much troubled with mealiness in his prints, and thought a different toning bath would cure it, but found it was no relief; so he thought he would change his silver bath and made it stronger, but with no success. He then made it weaker; it was all the same. The more or less fuming was of no consequence either, and so he gave it up. Finally he tried another sample of albumen paper, and the prints were all right.

The question is very often asked, "What amount of silver does it take to coat a sheet of paper?" I answered as follows:

Last fall I made a tour up the Hudson River to take some views, and took with me some printing-frames and three dozen albumen paper. I made a solution of nitrate of silver, 2 ounces; water, 16 ounces. With this solution I printed one hundred and forty 8 x 10 views, and had when I was done 8 ounces of my solution left over. I toned these prints with 38 grains chloride of gold. As I had no occasion to fume my paper, I used it without it, and found it so all the better, for I got the warmest tones that could be wished. The paper was the S. & M. of Mardock & Co., which I can recommend very highly.

An almost entirely faded out photograph was shown by one member, which was given to him to be copied, and he wanted to know how to accomplish it. One suggested to lay it between two panes of glass and treat it like a transparent positive. It is best to copy it by transmitted light; but another ventured to restore the photograph by the aid of chloride of gold.

A weak gold bath, from two to three grains to twenty ounces of water, will be strong enough. Immerse the picture in this bath, but perform it in the dark-room. After a few minutes the picture will assume a darker color, and appear more and more so after some time. When dark enough it may be put in the fixing-bath for about one-half minute, after which it must be carefully washed. The picture will keep now for a good while longer.

On motion, it was resolved to adjourn to the first Thursday in February.

CHAS. KUTSCHER,
Secretary.

OUR PICTURE.

THE picture accompanying our magazine this month is the one for which the prize gold medal was awarded for the best competing *portrait*, Mr. Walter C. North, Utica, N. Y., being the successful competitor.

Those who have the prize sets will be able to compare this with the others. It certainly is a very good one, without being at all pretentious, and the negatives are charming specimens of good manipulation. We have from Mr. North the following facts concerning it.

"I use an extra 4-4 Harrison lens, that works very well, although rather slow. Sky-light and side-light with southern exposure. White ground-glass, with blue ground-glass slides directly under it, that are movable, and by which I can temper the light on the sitter.

COLLODION.

Anthony's Gun-cotton,	. . .	5 grains.
Iodide of Ammonium,	. . .	5 "
Bromide of Cadmium,	. . .	3 "
Atwood's Alcohol, and		
Concentrated Ether,	. . .	equal quantities.

NITRATE BATH.

45 to 50 grains neutral; developer, proto-sulphate of iron, 1 oz. iron to 16 oz. water, and 3 oz. of acetic acid.

I use no redeveloper, but occasionally strengthen with a weak solution of bichloride of mercury after fixing and washing well.

The four negatives sent you were exposed thirty seconds on a light and clear day. No sun. Chemicals in good working order and a good subject, with the result as you can see. They are just as I made them; not a particle of retouching; should make choice prints; and, in friend Rhoads's hands, no doubt will be *prizes* in that line."

The prints were made by Mr. William H. Rhoads, 1800 Frankford Avenue, Philadelphia, on Clemons's albumen paper. Mr. Rhoads's printing is familiar to our readers, and his formula we have already published in our issue for February, 1870. Mr. Rhoads is willing to verify all the claims made for the paper by Mr. Clemons in his advertisement. It is excellent, and has attained great popularity.

Editor's Table.

THE Solar Camera Patent Extension Case is pending, and of course it would be improper for us to comment upon it until it is decided. We believe the interests of photographers are being carefully looked after, and we hope for the best.

THE "SLIDING BOX CASE."—At this writing we are promised a decision in this case on December 23d. The hearing was held December 9th and 10th. Mr. C. C. Schoonmaker was present, and called on us on his return, feeling very hopeful. We expect to have a communication from him announcing his success before we close. If it comes it will appear as an *Extra*.

A HANDSOME MEDAL.—"The Pilgrim Jubilee Memorial Medal," in commemoration of the 250th anniversary of the landing of the Pilgrims, is one of the most beautifully executed we have ever seen. They may be had of Mr. B. W. Williams, 119 Washington Street, Boston. Solid silver, \$3; silver or gold plated, \$1; the profits to be divided between the Theological institutions and the Congregational Building Fund. We mention them here: 1. Because we prize ours; and, 2. Because they were designed and made at the works of the Scovill Manufacturing Company, at Waterbury, Conn. If they may be taken as an earnest of the beauty of the "Scovill Medals" and "Holmes's Medal," offered at Cleveland last June, for the greatest improvements in photography during the Association year, then happy will be the man who gets them.

"THE PHOTOGRAPHIC TIMES."—Under cover of and with the *World*, the Scovill Manufacturing Company, Samuel Holmes, Agent, with their accustomed liberality and enterprise, will publish each month a Journal of their own, which they name "*The Photographic Times*," the purpose of which, they state, will be to look after the commercial interests of the photographer, *i. e.*, to tell him what goods are best to buy, and to bring such prominently before him. As independent journalists, of course the commercial department is one in which we can only take a certain independent part, and we are glad to have the matter taken up by so thoroughly good and responsible a house. There is need of it. Their object is not to induce your trade to them, for their business is to supply dealers with nearly all the goods they buy, but to lead you to buy the best goods of your own favorite dealers.

WE regret to learn of the recent death of Dr. D. C. Maxwell, late photographer and stock-dealer at Lynchburg, Va. We knew him and esteemed him very highly. Mr. L. C. Everett, another old photographer and stockdealer, at Troy, New York, died November 16th, very suddenly, of heart disease.

IMPROVED GRIT VARNISH.—Messrs. Cummings & Good, Lancaster, Pa., have sent us some plates varnished with what they claim to be an improvement on their already popular grit varnish, and which they say will dry readily in all temperatures. They propose to put it in the market as soon as practicable.

PHOTOGRAPHIC MOSAICS, 1871, is in wonderful demand, and the wholesale orders have almost exhausted the edition. The third thousand is nearly all gone, but we have "a few more left." Order early, and secure a copy. A few of last year and year's previous left also.

SOLID GLASS CORNERS!—Good photographers will be glad to see that the American Optical Company announces, in the *Photographic Times* that solid glass corners will hereafter be placed, of an improved shape, in the holders of all their first quality boxes, thus making them the best it is possible to manufacture.

ANSWERS TO CORRESPONDENTS.

"SUBSCRIBER." Chicago, sends some queries to "*Sphynx*" concerning the manufacture of camera boxes, which do not come within the province of *Sphynx* to answer. No doubt the American Optical Company, N. Y., would answer them fully.

"STEPHENS."—No doubt the wavy lines on your negatives are caused by too long a time intervening between the coating and dipping. In cold weather, especially, the photographer is apt to get his dark-room and his solutions too warm, and the collodion is apt to "set" too much before the plate is dipped. Avoid this, and try again.

"JULIUS."—No doubt the sample of paper you have is badly albumenized: irregularly, we mean. When those brown "sinears" are indicated on your prints in toning, quickly push them under the solution and they will sometimes disappear. Never allow a print to lie in the toning bath half covered by the solution and partly not.

T H E

Philadelphia Photographer.

Vol. VIII.

MARCH, 1871.

No. 87.

Entered according to Act of Congress, in the year 1871,

By BENERMAN & WILSON,

In the office of the Librarian of Congress, at Washington, D. C.

THIRD ANNUAL EXHIBITION

OF THE

National Photographic Association.

THE Third Annual Exhibition of the National Photographic Association of the United States will be held in Philadelphia, Pa., beginning Tuesday, June 6th, A. D. 1871, in Horticultural Hall.

The hall is large, admirably lighted on both sides, and will be so arranged as to accommodate exhibitors from all parts of the world.

A cordial invitation is therefore given to foreign and American artists to exhibit their work. In foreign cities it would be well for all intending exhibitors to arrange to ship their pictures in one lot, and to ship them early as possible—not later than April 15th—as there is always delay in passing the custom-house.

No duties are charged on foreign pictures, and the freight arrangements will be low, so that the expenses to exhibitors will be small.

Pictures may be framed or unframed, at the option of the exhibitors.

After the Exhibition there will be a sale of such foreign works as the Committee of Arrangements may be empowered to sell, and such sale will be conducted for foreign exhibitors without commission.

Foreign photographic journals will favor our cause by giving publicity to the above.

Further particulars will be communicated to applicants by the Permanent Secretary.

Arrangements and rules for home exhibitors will be given hereafter.

Arrangements are pending with railroad* and express companies, which will reduce the costs to those intending to be present or to exhibit.

There are fine hotels close to the hall, and reduced rates will be secured.

Prof. Morton will deliver two of his admirable lectures on *Light*, during the week. A grand Stereopticon and Lantern Exhibition will be given, and also a public reception at the American Academy of Music. These, with the grand Exhibition, and meetings of the Association, will make the occasion both delightful and profitable.

Begin to prepare *now*.

WM. H. RHODES,
Local Secretary,
1800 Frankford Avenue.

EDWARD L. WILSON,
Permanent Secretary,
Office Philadelphia Photographer.

* Parties in the larger cities will aid the Secretaries, by using their influence with ticket agents, to grant the most favorable terms for the Association.

CARBON PRINTING BY SINGLE TRANSFER.

From "The Amateur's Manual of Photography,"
Sixth Edition.

How often has it been found in connection with photography, that a process, or an improvement, has been suggested, and details freely given by an intelligent and unselfish experimentalist, which have attracted but little notice at the time, but which, after the lapse of months, or even years, has been *re-discovered* by some brilliant individual, and heralded forth with a grand flourish of trumpets as something "quite new."

We are led to the above remarks in consequence of the great and increasing interest which is being taken in the mode of printing in carbon by "single transfer," which for simplicity, ease of manipulation, and beauty of result, cannot be surpassed; and although we hear of Mr. A.'s process, and Mr. B.'s process, and Mr. C.'s process, no one seems to give a word of thanks to Mr. W. H. Davies, of Edinburgh, whose paper, read before the Photographic Society of that city, as far back as July, 1864, gave full details of a mode of proceeding exactly similar to that followed at the present moment, but which is usually considered to be quite novel. True, some improvements have been made, one or more of which have been patented, and even the process so fully described by Mr. Davies, was *itself* the subject of a patent taken out as recently as 1868, but which, fortunately for the patentee, only reached the stage of "provisional protection." In all cases, however, the principle has been identically the same, the only difference being in the substance employed as the medium of attachment to the surface upon which the pigmented paper is fixed for development.

With these few introductory remarks, we proceed to give, in as concise a form as possible (our space being limited), the mode of proceeding, assuring our readers that very short practice is requisite to insure perfect success.

1. *The Preparation of the Pigmented Paper.*—We are indebted to the excellent pamphlet of Mr. Blair, of Perth, one of the oldest, if not the oldest, experimenters in

carbon in this country, for the following mode of preparing this material: Gelatine, mixed with about a fourth of its weight of sugar, and a little common salt, is dissolved in from four to eight parts of water, according to the consistency required and the temperature of the atmosphere. To this is added sufficient India-ink or other pigment, and when thoroughly dissolved and well mixed, it should be filtered hot through fine linen cloth or flannel into a dish, or bottle with a moderately wide-lipped mouth, from which it can be conveniently poured upon the paper to be coated.

A sheet of paper is taken and immersed for some time in water, then taken out and placed upon a slab of patent plate-glass somewhat larger than the paper; two or three folds of blotting-paper are then laid on the paper so as to absorb all the surface moisture, and cause it to lay perfectly flat and level on the glass. The pigmented gelatine is then poured over the surface of the paper, which with the glass plate upon which it rests, should be slightly warmed so as to prevent the gelatine "setting" too rapidly, and when coated all over with an even and regular coat, laid aside in a perfectly level position, until the gelatine has "set." Other sheets may then be prepared in a similar way. When perfectly set the papers may be removed from the glass plates and hung up to dry. Some little experience will be requisite to insure a perfectly level coat of gelatine, but as the pigmented paper may be obtained ready prepared, many amateurs will be glad to be relieved from the trouble of preparing it themselves.*

2. *The Sensitizing of the Paper.*—This is done by floating upon, or immersion into, a solution of bichromate of potash, the strength of which may be from three to five per cent., and then hung up to dry in a dark but well-ventilated room. An immersion or floating for about a minute is usually sufficient, even in moderately cool weather, but in the hot days of summer we have

* As pigmented paper may be had of the stock-dealers, it will be cheaper to purchase than to make it. We can testify to the practical excellence of this process, and to the beauty of the results.—ED. P. P.

found an almost momentary immersion suffice, or the gelatinous coating has had a tendency to dissolve off the paper. (A stronger solution may be employed, and in some cases would be desirable, as the paper is more sensitive to light, but it is also apt to become spontaneously insoluble, and cannot be kept fit for use for many days after preparation.)

3. The "printing" is done in the usual way, only from the pigmented paper being evenly colored throughout, the progress of the print cannot be watched on the surface as in silver printing. Experience, therefore, must be our guide, or we must employ a photometer or actinometer, to enable us to judge of the force of the light.

4. *The Transfer for Development.*—Whatever transfer paper is employed, the manipulation will be the same. A piece is cut slightly larger than the piece of pigmented paper used (in the case of albumenized paper, it should be previously passed through moderately strong alcohol, methylated will do, to cause insolubility of the albumen), and both are plunged into a dish of clean water an inch or so in depth. The two surfaces are then placed face to face upon one another under the water, and after the lapse of a few seconds (in winter half a minute may be requisite), gently draw out together so as to exclude air-bubbles, which would cause holes in the finished print, laid upon a slab of glass, and perfect contact insured by passing, with a steady movement, a firm but moderately yielding edge over the papers, thereby *scraping*, as it were, all excess of water and air before it. The compound paper should then be placed between sheets of blotting-paper till ready for the next operation. By means of a small instrument of India-rubber, a "*squeegee*," as it is termed (being in principle precisely what sailors dry the deck of a ship with), a number of prints may be transferred and placed between sheets of blotting-paper in an exceedingly short space of time.

5. *The Development.*—After the prints have been left, as above described, from ten minutes to half an hour, they are ready for development, and they may be judged to be ready when the yellow color of the bichromate has penetrated through the transfer

paper. They are first placed in a vessel of cold water to remove the principal part of the soluble bichromate, it being desirable to remove without heat as much of this reagent as possible, not only on account of its color, but equally so on account of its action upon gelatine, and when the yellow tint has been nearly removed, the papers are then placed in water at a temperature of from 90° to 100° Fahr. After a few moments, the warm water freely permits the removal of the pigmented paper, which can then be easily separated from the transfer papers, when most of the gelatine and color will be found adhering to the latter. The portion not rendered insoluble by light will then readily wash away, leaving the picture in all its details. To facilitate the removal of the color, &c., the picture may be laid upon a glass slab, and a stream of warm water allowed to flow over it, when the development will be rapid and perfect. When the whole of the details are out, and the development of a picture seldom occupies more than three or four minutes, the print should be rinsed in cold water, or allowed to remain a few minutes therein, to remove the last trace of chromate, which would detract from the purity of the color. It may then be hung up at once to dry, but to insure the perfect hardening of the gelatine, the writer finds it most desirable to immerse it for three or four minutes in a dilute solution of common alum, of about one or one and a half per cent., and after a final rinse, it may then be dried, trimmed, and mounted in the usual manner.

Prints obtained in this manner from ordinary negatives are, of course, reversed; but there are so many ways of obtaining reversed negatives, by taking the picture *through* the glass, by the use of a prism or mirror, or by transferring the film to gelatine or to collodion, that few photographers will be unable to produce what is necessary in this respect, and the slight additional trouble will be amply compensated for by the knowledge of the undoubted permanence of the results.

Do you take the *Photographic World*?
First three numbers for \$1 to *Philadelphia Photographer* subscribers.

"CURIOSITY SKYLIGHT."

BY T. BROOKS.

PERMIT me through your valuable Journal, to gratify the curiosity of some of our Philadelphia artists, and, at the same time, encourage others who are continually complaining about not having a good light.

The construction of skylights and the manner of working them, has of late been a subject of much discussion, and it has been asserted by many, that in order to obtain a good picture, the skylight must be constructed in one particular way. It is true that the better the light, the less trouble will be experienced in obtaining satisfactory results; but it is not to be expected that every one can have his operating-room arranged in a manner just to suit himself, especially in large cities, where many are obliged to take just such room and location as they can get; perhaps jammed in between two brick buildings with no chance for anything but top-light, and, in many cases, "not much of that."

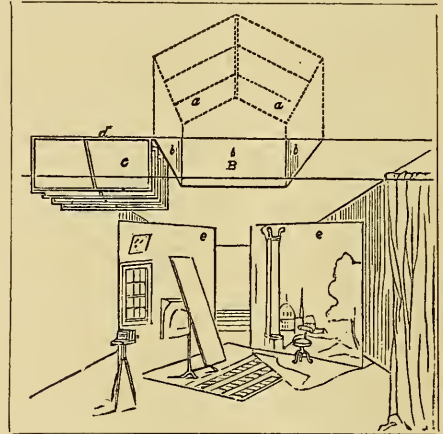
The manner of working a good light has been so thoroughly explained, that any practical photographer by following the instructions given in your Journal, cannot fail to obtain the desired results. But are there not others, who like myself are continually working under difficulties, whose desire is to advance and do as good work as his neighbor, in order to obtain an equal share of patronage? Yes! And to this class, especially, is this article addressed.

In order to illustrate the manner of working my "curiosity skylight," as it has been called, I inclose a diagram of the interior of my room.

It will be seen that the light was made to light the store below, and is of peculiar construction for photographing.

aa are the lights, six in number, half-inch thick (and strong, as was proved by our last hail-storm), 3 x 4 feet, averaged as indicated by the dotted lines. *B* the end, and *bb* the sides of the opening in the roof, which is 4 feet 9 inches x 12 feet; and *c*, screens of blue paper to protect against sunlight, which slide under the ceiling, *d*, when not in use. *ee* are the backgrounds in position. The side-walls are white coated, and act as side lights.

By paying strict attention to the light during the past twelve months, I have been enabled to ascertain just the direction the light comes at all times of the day, and by arranging my subject and camera accordingly, I now find but little trouble in obtaining any desired lighting. By placing the sitters near the middle of the room, strong top-light is obtained; and by placing them near the white wall strong side-light. My backgrounds usually stand about 6 feet from under the light; and to darken them I run them back from the sitter. I arrange my sittings on all sides of the light occa-



sionally, but usually on the southeast or southwest side. By becoming familiar with the light I have become master of it. The glass, as I said before, is half an inch thick, with an irregular surface. Many would say it must work very slow, but in my opinion it gives more light than the same amount of ordinary single-thick glass; as the irregular surface forms many small lenses, and concentrates light from all sources, and diffuses it into the room; "then why not use thick glass for the studio as a protection against hail storms?" The pictures I send you were taken late in the afternoon, by a one-fourth size Darlot tube, with a three-fourth inch diaphragm, in twenty-five seconds, which is usually time enough for card negatives.

To those who think their skylights are not good, I would say study the nature of them, and in nine cases out of ten you will find you have got too much light, or are making

your sittings on the wrong side of the room; "for under the worst of skylights you occasionally get good results." And if you cannot direct the light the way you wish, watch which way it *will* go, and by a little judicious management of your screens, your worst enemy, light, becomes your servant and friend.

And, in conclusion, let me say a word to those whose curiosity has been aroused, viz.: if you wish to see the "elephant," my door is always open to those who are willing to exchange ideas with a fellow craft.

630 ARCH STREET, PHILADELPHIA.

PHOTOGRAPHIC DIALOGUES.

(SEQUEL TO "ONE HUNDRED DAYS IN A FOG.")

BY ELBERT ANDERSON,

Operator Kurtz's Gallery, 872 Broadway.

A. I HAVE told you that a bath of 3 gallons will sensitize upwards of 600 4-4 plates, and *may* require filtering once, twice at most. Somewhat depends upon your own cleanliness of manipulation. A half-gallon bath, newly made, may very properly be iodized by coating a 4-4 plate twice with collodion, and leaving it in the solution over night. My method of iodizing a large bath (say 3 or 4 gallons) has already been given. This brings us to the 49th day.

M. I met a feller out West, who told me that he found his bath worked better the older it got, and in fact that he got better chemical effects as his bath approached over-iodizing. Is there anything in this?

A. The "feller out West" certainly knew what he was talking about. Unquestionably, as the bath approaches a state of saturation with iodide, the best chemical effects are procured; from the simple fact that the iodized film is less and less interfered with, the saturation of the solution preventing its attacking the film. That fact alone is one in a dozen good reasons for using a large bath, well iodized, as you may thus use it for a long time without its becoming over-iodized. On the 46th day, E. L. Wilson says: "A bath not saturated with iodide of silver will produce unequal results." He makes no allusion here to those little tup-

penny baths of half a gallon, which must go out of order every semi-occasionally, for which reason you cannot iodize sufficiently without overdoing it after dipping very few plates.

M. The 49th day says: "Every plate must be removed from the bath as soon as coated, that the solution may be preserved as long as possible below the point of saturation." (Devine's Practice, page 33.) It strikes me that this gentleman's head is level.

A. You are right, and the 51st day answers it completely. "The plate should never be left in the bath longer than necessary." (Lea's Manual.)

M. Now here's something that is an enigma to me, which might even bother the Sphinx herself. I will read it to you. "52d day. When the iodide of silver, previously dissolved in the bath, crystallizes upon the film, leave a plate in the solution all night, that the excess of iodide of silver may gradually crystallize upon its surface, and so be removed." (Hardwich's Chemistry, 7th ed., page 521.) Now considering that you have taught me that this dipping of plates in the bath was the very cause of its becoming over-iodized, and now I am told, on the contrary, that this is the method of removing it, I am rather muddled.

A. I cannot conceive how Mr. Hardwich could have written this paragraph as it now reads. Either I don't understand what he means at all, or else, "Why, this is lunatics; this is mad as a mad dog." Now follow 53d and 54th days. Iodide of silver is more soluble in a cold solution of nitrate of silver than in a warm one.

M. Well, we are half through our reviews; let's irrigate. Here's luck. Now we come to sunning the bath, which will carry us to the 60th day. What do you say, sun or not sun?

A. If the bath be put in the sun, whilst it (the *bath*, you know, not the *sun*) is acid, it might be left there a year without the sun's having the least effect upon it. It must be first made slightly alkaline, when the effect of the sun's rays will be to blacken the solution from organic matter, which will finally be thrown down as a black

powder, and when the solution becomes *perfectly clear*, all further action ceases.

M. It *does* benefit the bath, then?

A. Yes, of course.

M. You say, "Yes, of course," but you hold something in reservation, I know.

A. I do. Boiling a bath properly for an hour, will do more good than sunning it for a year. *I never sun a bath.*

M. "It has, however, been justly remarked" (61st day) "that, in diluting the bath, the disordered bath must be poured into the water, and not the reverse." (M. C. Lea, *Mosaics*, 1867, page 10.) Then follows the word, "WHY?"

A. Mr. Lea is correct; and when we come to renovate *our* bath, you will be told "WHY?"

M. The 63d day says: "When, in the course of time, the bath becomes saturated with iodide of silver, add crystals of nitrate of silver." But on the 64th day Devine enters a protest.

A. I agree thoroughly with Devine, "and" (to quote his words) "advise the operator never to strengthen his bath until it is thoroughly renovated and made over," (page 36), which covers the 65th and 66th days' dispute. And now, Mr. Marshall, what do you think of the following: "67th day. Better make a new bath than repair the old one, since nothing satisfactory will be likely to be got from it." (R. D. Ewing, *Mosaics*, 1870, page 54.) Considering that I have been "repairing" my bath for about *four years past*, and have received the *first premiums* at all the Fairs of the American Institute, during this period, I am not unnaturally led to suppose that something "*satisfactory*" *has* been got from it.

M. Well, yes; "it does look that way," certainly. But you *must* have made a *new* bath, some time or other, or else you must have a "healthy old bath" by this time.

A. There stands in Milan an old cathedral, where visitors are shown a wheelbarrow supposed to have been blessed by some patron saint hundreds and hundreds of years ago, and yet it has been used ever since to perform the roughest kind of work, and is at this present day just as good, ay,

better than new; in fact, it never will wear out.

M. *Never* is a long day. Why won't it wear out?

A. Because, in former years, when it was first put in use, the wheel broke, and so they got a new one put in; later, the bottom fell out, and a new one was put in, in its place; by and by the handles broke, one after another, these in turn were replaced by new ones; next the new wheel gave out, and was replaced; again the bottom succumbed, and so this has been going on for hundreds of years.

M. Yet this is the *same* wheelbarrow (!)

A. Exactly. Like my bath, it's the same one; repaired from time to time, ever since it was first made.

M. I should say you were not very partial to new baths.

A. I look upon a new bath pretty much as my cook regards the griddle "buck-wheat-cake mornings;" she says she must "grease up and fry two or three rounds" before she can "git things runnin' smooth-like."

M. How do you replenish your bath, then?

A. I have told you, I use two baths of about four gallons each. I coat from fifty to sixty 4-4 plates daily, and find they last me about six or eight weeks, during which time I may have filtered once or twice; thus I am enabled to coat upwards of two thousand plates before any signs of exhaustion exhibit themselves. In the meantime I make up a bath two gallons at 20 grs. strong, and in an alkaline state boil down to 40 grs. Iodize as before stated, by leaving in an 8 x 10 plate all night. I use this as opportunities present themselves, and in a short time it works perfectly. I then decant this into a large demijohn, and if necessary make another, or more, and it is with these I replenish the larger baths. For the thorough treatment of a disordered bath—"see small bills in future advertisements."

M. The 71st and 72d days relate to abstracting water from collodion.

A. I should suggest as the best method of doing this, "chucking" the collodion out of the window.

M. The 73d, 74th, and 75th days, a ques-

tion of developing. How is your developer made?

A. I make two solutions, as follows: No. 1. 1 oz. protosulphate of iron; 1 oz. of acetic acid, "No. 8," and 12 oz. of water. No. 2. 1 oz. iron, 2 oz. acid, 20 oz. water; alcohol (only if necessary) enough to make it flow over your plate smoothly. Mix proportions of Nos. 1 and 2 to suit. Much depends upon light, exposure, drapery, weather, &c., &c. In cases of children, where you cannot get "time," use No. 1. With a fine light and full time, use No. 2; even weaker. I have never noticed the effects alluded to on these last mentioned.

M. The 76th day says: "In developing, hold the plate absolutely still; by so doing the detail is better obtained." (C. W. Hull, *Mosaics*, 1870, p. 77.) How is that?

A. Assuredly. I have seen some operators (!) "jiggle" a plate up and down as if they were trying to balance a marble on its surface. *Why*, I cannot conceive; that's probably one of the "secrets of the dark-chamber."

M. The 77th day says: "Use the developer with a lavish hand; never mind the silver washing off." (E. Dunmore, *Mosaics*, 1870.) Is this "sound on the goose?"

A. I flow my plate as rapidly as possible, and endeavor to *wash off all the silver I can*. There is always plenty left, and *to spare*. And, to answer the 80th day, I make my developer fresh every day.

M. We have now reached the 83d day, which says: "The operator should aim to get his negative intense enough after one development with iron; there will generally be found no difficulty in accomplishing this object." (Devine's *Practice*, p. 49.)

A. I find no difficulty whatever. Beware of strengthening (!) Remember what Crockett says: "Be sure you are right and then go ahead." The 84th and 85th days already answered.

M. The 86th day—

A. Is sensibly answered by the 87th day, which says: "Printing may be done either in the direct rays of the sun or in diffused light; the choice between the two will *depend upon the nature of the negative*." (Lea's *Manual*, p. 212.)

M. The 88th to the 94th day is a question

of the effect of bromide in reducing contrast.

A. If the contrast is caused by improper lighting, don't look to your *chemicals* to remedy it. A proportion of about three of bromide to five of iodide is not far out of the way.

M. The 95th day affects me personally, I being an *artist*, and not a photographer. Thus: "For the purposes of copying I would *invariably* use the full blaze of the sun. Some *artists* pretend that this system is false." (Silver Sunbeam, p. 162.)

A. You will have to get the "beam" out of my eye before I can see it. The "Beam" is undoubtedly entitled to his opinion, else where are our "free institutions?" But if you will take a "pretender's" advice, you will do nothing of the sort. It depends entirely upon the nature of the picture to be copied. And, furthermore (96th day), use your *ordinary portrait collodion*, and *not* a collodion "that is a simply iodized collodion, without any bromide." (The Beam, p. 28.)

M. The 98th day says: "We certainly prefer an intense negative to a thin one." (Towler's *Almanac*, 1867.)

A. 'Twere hard, indeed, to deprive this gentleman of his "preference." The 99th day observes: "A good negative should be *thin* and full of detail." (Text-Book of Photography, p. 18.) The "Beam" to the contrary. And so "mote" it be.



GOSSIP.

THE National Photographic Association certificate of membership seems to have given universal pleasure, and the most of those who have written us concerning it assure us that as it hangs, neatly framed, in their studios, it will be a constant reminder to them to work hard and not disgrace the Association of which they are

proud to be members. One gentleman, from Connecticut, writes: "Perhaps it would be well to have the condition introduced, that any member will forfeit his right to use the trade-mark if he is caught using it upon poor work. N. P. A. should mean, *Nearly Perfect Article*."

Some complain that they were charged additional postage. This is wrong, for we contracted with our postmaster here to carry them for four cents each, and no more should be exacted.

One correspondent sends his dues to the treasurer promptly, and takes occasion to grumble a little, and demands to know "what the Association has done?" He certainly could not have been at Boston or Cleveland, and we cordially invite him to begin now to save funds and come to Philadelphia next June, and he shall see what the Association has done. All he wants is to have his soul stirred up and to feel a deeper interest in his profession. What has the Association done? Why, it has awakened photographers all over the land to greater efforts to produce good work, it has caused the public to respect us all more, it has educated the tastes of all concerned, it has killed one great imposition in which all were concerned, its members have scotched and paralyzed a second, and stopped forever the machinations of a third, and there is no telling how many others it has *prevented* from lifting their slimy heads. Its work goes on silently and surely, and it is doing *great* good. Come all to Philadelphia in June, and see.

Mr. G. H. Sherman, Elgin, Ill., writes us as follows: "Business is good, owing in a great measure to my keeping up with the styles and the advanced stage of the art. Whether my attending the Exhibition and meetings at Cleveland benefited me or not, people think I can take better pictures since I was there. Any man who keeps himself posted is sure to make it pay. I know of no better way to keep posted than to take the *Philadelphia Photographer*, and attend the annual conventions of the National Photographic Association. All others may consider themselves behind the age, and may expect to see their business fall behind."

There is much truth in what Mr. Sherman says. Try it!

Mr. J. C. Downing writes: "I shall be with you in June *sure*, for I am now 'putting down' five dollars every Saturday for the trip."

Sure that is the true way, and we hope many are doing the same. You can easy *save* enough to come.

After calling attention to the new style monogram at the head of this, gotten up by Messrs. Crosseup & West, as a better style for printing on stiff cards, and after joggling delinquent members once more in behalf of the treasurer, to pay their dues, we append a list of those who have recently joined the Association:

S. Anderson, A. Bonnet, Wm. Brown, J. G. Barrows, J. D. Bliss, S. P. Burgert, J. C. Bowers, F. B. Clench, W. H. Cranstons, E. F. Everett, N. G. Fowler, W. J. Gurlitz, J. F. Grossklaus, A. Hilbert, J. C. Haring, J. H. Lamson, James Monaghan, W. A. Manville, J. W. Morgencier, J. M. Morton, H. D. W. Moulton, Christen Olsen, Louis De Planque, A. H. Plecker, David Ricksecker, Daniel Sewell, E. J. Stewart, W. Edward Tarr, Louis Van Iterson, F. Ulrich, M. A. Kleckner, J. T. Doran, J. L. Gihon, Geo. A. Thompson, W. H. Masters, G. W. Chase, John F. Calm, Howard G. Hall, Miss E. P. Browne, J. Davis Byerly, T. M. Schleier, C. W. Stiff, N. C. Bosasley and W. S. Lyle.

CORRESPONDENCE.

UP MT. WASHINGTON IN WINTER.

SUMMIT Mt. WASHINGTON. Dec. 22d, 1870.

DEAR PHILADELPHIA PHOTOGRAPHER:

OUR expedition has proved a success thus far; although we had some trouble in getting the telegraph to work. The putting of it in complete order was delayed very long, but it works well now, and I have full confidence in its durability, as it is now covered with snow most of the way.

We are very comfortably situated for the locality, with plenty of provisions and coal. Have a United States telegraph operator; and are soon to be joined by another gentleman from Massachusetts. I have asso-

ciated with me Mr. H. A. Kimball, of Concord, N. H. We have got some very good negatives of cloud effects; although there has been but one and a part of a day we could work. We had a pretty hard time in getting up, and it came very near being a serious job for Mr. Kimball. I will give you a little account, as it may interest you.

Mr. Kimball and myself started, accompanied by Mr. C. F. Bracy, of Warren, and C. B. Cheney, of Orford, photographers, who were going up to stop a few days with us. We got to the foot of the mountain at about 1 P.M., November 30th, having been delayed by trees that had blown across the road between the White Mountain House and the depot at the foot of the mountain, but it was so warm and pleasant, and the mountains were so clear, we determined to make the ascent at once—so we got a dinner at the house of the woodchoppers who live at the depot, and began the journey up at half-past two. We followed up the railroad, walking on the sleepers, but the snow had made them rather bad things for a foot journey, consequently our progress was rather slow, and, being warm, it started the perspiration freely.

As we got up out of the woods near "Jacob's Ladder," the complexion of things changed; dark threatening clouds stretched along the crests of the Green Mountains, and were moving down upon us in a solid mass. We made haste to reach the top. Mr. Kimball, not being used to such tramps, was getting fatigued, and had left his pack at the foot of the Ladder to lighten him for the rest of the journey.

When we had got some way up on the open ground it was sunset, and the clouds began to drive across the top of the mountain. In fact, it began to look serious, but after some consultation, we determined to push up, as it was further back than up, and very dangerous walking on the railroad in the night. Moreover, there was no shelter but the depot at Waumbeck Water Station, and no chance to make a fire even there. There was some danger of getting lost unless we kept in sight of the railroad. We were soon in a dense cloud. Mr. Bracy got separated from the rest of us here, and Mr. Kimball declared himself "played out."

What was to be done? Leave him to perish and save ourselves, or make an effort to get him up? I thought I had strength to do it, I *certainly had the will*. Mr. Cheney declared himself ready to try, so we went around the ridge a little, out of the wind, and rested. At the same time we rubbed and slapped our exhausted friend with the flat of our hands, which does a great deal towards restoring a person in that condition.

After a short rest, and having dropped all traps that would load us down, he took a small cord in his hand, whilst I drew the other end over my shoulder, Cheney locked arms with him, and then we pushed up into the clouds and darkness. We had a full mile to go, and he was growing worse fast. We had to resort to rubbing and slapping, letting him drop behind anything that would break the force of the wind. He begged us to leave him and take care of ourselves. I was excited, and could have done a great deal more as long as my strength held out, and I knew if reaction did not set in or Mr. Cheney give out, we could get him and ourselves up safe. By resting often, we at last got up the steep part to where the ground was less rugged and snow harder, with the wind on our backs, which helped us along. Across this we made rapid progress. After we had got across, we had to turn to the right and go up a sharp rise to the depot at the summit, which brought the wind partially in our faces. We crossed over the track here to get some protection from the wind by trestle-work. Our friend was so far gone as to move mechanically, and we were obliged to let him rest often, dropping down helpless. We would wrap our overcoats about him and gathered close about so as to impart as much warmth as possible. We soon passed the spot where Miss Bourne perished at a much earlier season of the year. Could we make the rest of the way, or, would there be a second monument of rough unhewn stones, erected by strangers, to the memory of one who had dared to face the fierce blasts of winter? I felt my strength leaving me; the excitement had driven me beyond my usual strength. I knew it was but a short distance, but my friend Cheney still supposed we had some way to go, and he

worked bravely on. We could now go but a few feet at a time. The wind was blowing in our faces, the ground rough and steep, and I was obliged to rest often, and then exert myself for one more lift. At last, we caught sight of the house but a few feet away; and if there was ever a welcome sight this was one to us. We gained the entrance and gave a shout, but the wind was so fierce as it rushed around the corner that we were thrown down. The party inside (members of our expedition who had gone before) heard us and rushed out, and dragged our now almost wholly unconscious burden in to warm and comfortable quarters. No limbs were frozen, so we received no injuries except being exhausted.

Bracy, who had separated from us, followed the railroad all the way, and reached the house half an hour before us, having fallen once and become nearly unconscious, but arousing himself in time to see the danger of his situation he pushed up, once thinking to burrow in the snow, but gave up the idea, and soon found he was close to the house.

We were all pretty sore and stiff next day, but as we had got up safe, we felt pretty cheerful. It was the roughest and coldest day that had been on the mountain for the season. Hereafter, I may give some more of our winter's experience.

A. F. CLOUGH.

MANIPULATION.

BY DAVID DUNCAN.

THE various effects which can be produced in making photographic pictures by a difference in the mode of manipulation, is a subject deserving attention. The more deserving, because it has hitherto received too little notice, even by those who are termed "skilled manipulators." Photographers, as a rule, bow before the "mighty god" "Brains;" an idol which certainly should command our adoration, but which is robbed of its potency without manipulation. The word manipulation is expressive. There is magic in the sound. To skilfulness therein civilization and the world at large owes much. The cunning and skill of the mechanic, artist, sculptor, or musi-

cian, depend much on manipulation. So does many a good photograph, though light, temperature, chemical condition, &c., are valuable auxiliaries. That success in the photographer's art owes much to skilful manipulation, is a point generally known; a "corn" universally acknowledged. "If you think photography is a mere mechanical business, and success more dependent upon good luck than careful manipulation, get out of it; you are in the wrong business," says Edward L. Wilson, in "Mosaics," 1869. Operators who rarely stoop to notice the cleaning and albumenizing of plates, will find it advantageous to recede a step or two, and become efficient plate preparers! It will be found better than cursing the boy when plates are dirty, or consigning the "nigger" to a dismal doom. There is more in plate cleaning and preparing than is dreamt of in our philosophy.

Again, not every one that saith "I am an operator," knoweth how to coat a plate with collodion. A simple matter apparently, but requiring *much* skill in the manipulation thereof. No definite mode as to how a plate should be coated can be clearly stated; the operation requires judgment, experience, and depends much on the condition or quality of the collodion itself. It is not my idea, however, to write about skilfulness or unskilfulness in manipulation; the effects of the latter or former are well known. I merely desire to direct attention to the different effects which can be produced at will by altering the method of manipulation. For example, in coating a plate with collodion, one can obtain softness or intensity, fulness of detail or a lack of it, with a good sample, by the "modus operandi." It is this power that enables one man to obtain pictures of a class widely differing from another, albeit both may never change the mode of working they acquired in the early days of apprenticeship. It is this power which makes a photographer a success or a failure. Further, how various are the effects which can be obtained in a negative by changing the style of development! Flooding the plate, driving the "free nitrate" before it, and letting the solution run over the sides, yields a negative of one class. Pouring on

smartly just enough to cover the plate without spilling a drop, gives a negative of another. Do not let me be understood to say that because a man lets the solution run over the sides of the plate, he is a careless manipulator, for much is dependent on the mode of manipulation, upon the kind of negative he strives to make, or condition of the chemicals. Only observe the POWER we photographers possess!!! To make at will (promising light, temperature, &c., aid us), by experience and practice, a "hard" negative or "soft" one, a "thick" one, or a "thin" one. Further, still. The fine details of a picture can be arrested while the "high lights" are building up during the development. By holding the plate still, and as even as possible, the picture develops evenly, and possesses far more *fine details* than when the solution is waved to and fro. The subject could be expatiated on to a much greater length. In considering the matter, the day can be recognized when "secret processes" shall be no more; and while the POWER of KNOWLEDGE shall be appreciated, the POWER of MANIPULATION shall likewise be esteemed, for no man can take it from him who possesses it.

MOUNTING OF PHOTOGRAPHIC LENSES.

MR. EDITOR: I do not remember having seen the attention of the photographic fraternity called to a serious error into which opticians have almost universally fallen of late years, viz.: The mounting of photographic lenses and other optical instruments. Some years ago it was the practice of opticians to mount their lenses in such a manner that they could easily be removed from their cells. The front lens of the portrait combination, for instance, was kept in its place by means of a neat ring, screwed down either inside or outside the cell or mounting, so that any time the glasses needed cleaning they could be removed for that purpose. When the glasses are out of their cells, the cleaning operation is much more easily and thoroughly effected, than when they are confined by cement or other means, as it is in vogue at the present day. The cleaning of finely polished glass surfaces, is

an operation that must be conducted with the most scrupulous care, otherwise great injury is done to them by scratching. We hold that, notwithstanding the many and valuable improvements made in photographic lenses during the past few years, the present practice of sticking or plastering glasses fast in their cells with cement, is a move backward. They are not only more easily injured in cleaning, but the cement is highly injurious to the glass. I have seen lenses ruined by *stains* extending from the cement into the glass. It is well known that as hard as glass is thought to be, yet it will imbibe stains from contact with other substances, that nothing short of grinding will remove.

Since the introduction of the present method of confining optical glasses to their cells, I have yet to see a secondhand lens, so mounted, entirely free from scratches, while, on the other hand, old secondhand Jamin, and other lenses we meet with, are far less injured by scratching, owing, I think to their being *removably* mounted. An old secondhand Jamin lens in my possession, has no doubt passed through many hands in years gone by, and was roughly used in the field during the rebellion, presents a sorry appearance outside, but the *lenses* are in as perfect condition as though fresh from the hands of the maker. This I attribute to the good old-fashioned plan in which the lenses are mounted. There is not one intelligent operator in a hundred, who will not remove the glasses from their cells if he can do so, when he wishes to clean them. I am free to acknowledge that much of this scratching is due to ignorance or carelessness, but I think still more to the manner in which the lenses are mounted at the present day. I hope that abler pens than mine will take up the subject, and haunt lens makers with it until they return to the old plan.

Respectfully yours,
JAMES M. HOUGHTON.

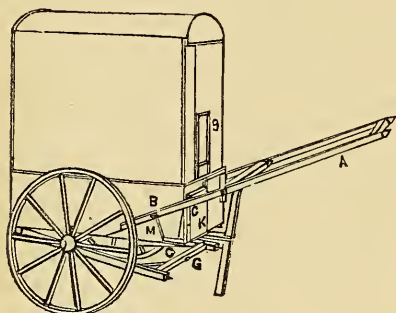
DR. VOGEL's Handbook of Photography will be ready next month. See advertisement.

CHASE'S PORTABLE DARK-CLOSET.

BY G. W. CHASE.

HAVING gained many items of value from the *Philadelphia Photographer*, I feel like sending you a mite to replace some of the greater ones given me. This view tent I made to fill a want much needed by me, to wit: a tent I could go out with near home and one I could take some distance, with all the chemicals, box, tripod, and baths, &c. I think I have it in what I describe below. The whole outfit weighs 50 pounds.

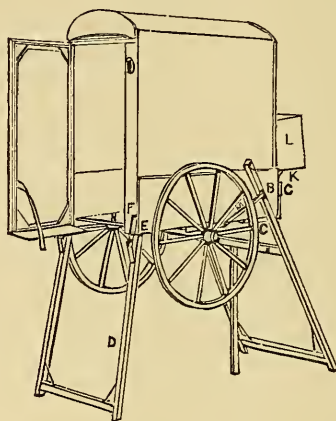
FIG. 1.



The wheels are from a "played-out" baby cab. The box is made of half-inch pine, is 8 inches high, 22 by 36 inches from the corners; rods of ash three-fourths inch square, and 32 inches high, with side pieces of the same at the top. The end pieces are of thin pine, with the top arched to shed rain; the whole covered with rubber cloth. The door in the back end is 18 inches wide and 28 inches high; a frame covered with rubber cloth. One cut shows the thing in running order, the other set up for use. A is a handle or legs, fastened at B, with a bolt through the box. At C are buttons to hold A in place. At D are the back legs, hinged at E, and kept from opening too far by the projection F, secured by a hook at the front, G, when not in use. The bottom of the box is cut out a half circle at H, which allows one to go in and close the door. To keep out the light a piece of strong rubber cord is drawn across the back of the cut-out, and a double thickness of yellow muslin is folded over the cord and tacked to the bottom in front of the cut-out. A person pressing against the rubber cord, it will give and

let them into the place cut out, closing against the legs and keeping out the light. I is a yellow glass, to light the tent. K is a shelf, hinged to the box, and kept up when wanted by a brace. L is a water-can, with

FIG. 2.



rubber tube going through a hole in the box, and the end kept above the level of the water in the can when not in use; when wanted, the end is lowered and the water will run. The door is secured by a strap. The bottles are kept in place by rubber cords fastened to the sides, with a ledge at the bottom, to keep them from sliding.

Figure 1 shows the tent ready to travel. To use: Unhook at G and allow the back legs to drop on the ground, the spikes in the points will catch. Drawing them forward will raise the box, wheels, and all, the stop F keeping the box from going too far forward. Now place one hand under the front of the box and loosen the button at the front C, and allow the legs to drop down, when they can be fastened by the button under the bottom at C, holding it firm. The legs in my tent are 30 inches long from the fastening. For a tall man they should be longer. Everything but the tripod is carried on the inside. M is a block of inch board, fastened to the box, to keep the front legs or handle in place.

MEASLES.

DID you ever have a disease called the "measles?" It is useless to propound this question to your "Sphinx," for he (she, or

it) looks as if in the midst of a severe attack at this present moment, but then you say "he" is "perfectly harmless," which, I presume, means that he would not "give it to a fellow," on a slight provocation, but somehow or other it seems to me that I have had rather more than my share of this disease.

I had it, "they say," I did, when a "babe;" not "in the woods," but at the breast; and after I was grown I am personally and painfully aware of having it again; and only last week I had a third attack, but this time it came not upon my person, but upon my pictures, my negatives, and for several days it "got me down" badly, but I have recovered from it, and I wish to tell your readers, some of whom, no doubt, are liable to be similarly attacked, just *how*.

I first thought the trouble was in my bath, but having several bath solutions, some of which had been sitting in the sunlight for months, and having tried them all, with the same measly results, I concluded it must be somewhere else, and for four long days I kept on experimenting, until I had made every chemical anew, and prepared them all with the utmost care and regard to cleanliness, and still the measles would not "out."

I made strenuous efforts to overcome this mysterious difficulty, after time and again witnessing the image develop in all its beauty, and over and over again viewing it by transmitted light, to behold the "irrepressible" measles. For aside from the efforts I made in my own room, I tried my collodion, developer, &c., &c., one by one, and all together, in the gallery of a brother photographer, where they would not "measle" a bit.

"But to make a long story short," I will say that my dark-room is so situated that the use of artificial light seems to be a necessity, and I use a coal oil lamp, the chimney of which had become very speckled with what resembled "fly dirt," and I finally found that here was the source of all my trouble, and having surrounded the lamp with orange-colored paper, everything now works like a charm.

In conclusion, let me say that any photographer, who thinks that a *little* artificial (white) light will not affect very sensitive chemicals, is simply mistaken.

J. PERRY ELLIOTT.

FERROTYPERS' ASSOCIATION OF PHILADELPHIA.

THE regular monthly meeting of the Ferrotypers' Association of Philadelphia, was held at C. L. Lovejoy's gallery, January 3d, 1871.

Minutes of last meeting read and adopted.

Mr. Charles D. Whittemore, and Mr. J. Silver, were elected members of the Association.

Letters were read from Mr. A. D. Cadman, Jacksonville, Ill., and Mr. A. D. Morgan, Norwich, Connecticut.

Treasurer's report read, received, and the thanks of the Society voted for his labors.

President, A. K. P. Trask, retired, and D. Lothrop took the chair for the ensuing year.

Motion by Mr. Seeler, that each member upon joining the Association shall pay one dollar, and one dollar annually thereafter, on January 1st.

An invitation is extended throughout the United States to ferrotypers to become members of this Society, and send specimens of their work and their formulas.

D. Lothrop received the highest number of votes for the best ferrotypes exhibited.

A discussion is to be held on Skylights at the next meeting.

Adjourned to Mr. C. M. Gilbert's gallery, 202 South Second Street, Tuesday, February 7th, 1871.

C. L. LOVEJOY,
Secretary.

Regular monthly meeting, held at Mr. C. M. Gilbert's gallery, 202 South Second Street, February 7, 1871, D. Lothrop in the chair.

Minutes of last meeting read and adopted.

Joseph Weaver was elected a member.

Discussion on chocolate plates.

The Secretary was authorized to correspond with the Phenix Plate Company, also to have published in the *Philadelphia*

Photographer some complaints in relation to the chocolate-tinted, glossy plates; very many of them have a sort of greasy substance on their face, which is impossible to clean off, which also prevents the collodion from flowing freely. The Japan sometimes runs on the back of the plates, and remains in a soft state when the plates are packed, causing many of them to adhere together. It is also on the edges at times, and flows back upon the face of the plate. Some are found that seem soft; the greasy plates have that appearance, as though they were not baked enough.

Also, there seems to be a fault in packing; several plates on top and bottom of the box seem very dirty, and are entirely worthless. It was suggested, if a stout paper was put into the box, then after the plates were put in, it should be folded over the plates, it would keep out all dust, which seems to work in around the box and between the plates, causing little scratches on their surface.

Mr. Trask had some pictures he had experimented with by Mr. Bell's receipts. Some that were almost entirely burnt out, were darkened so that they made a very salable picture. Mr. Bell's formula is:

Water,	10 oz.
Cyanide of Potassium,	1 oz.
Iodine,	20 gr.

Mr. Trask says care should be taken not to get the solution too strong.

Mr. C. H. McAllister received the unanimous vote for the best ferrotype.

A discussion on skylights, and some experiments on lighting the subject followed.

Adjourned to Mr. A. K. P. Trask's gallery, 40 North Eighth Street, Tuesday, March 7, 1871.

C. L. LOVEJOY, Secretary,
500 S. Second Street.

DEFEAT OF THE SLIDING BOX PATENT.

OUR readers have already been apprised by our *Extra*, issued Feb. 7th, of the decision in the suit of S. Wing & A. S. Southworth (and how many others we cannot tell),

against Mr. C. C. Schoonmaker, of Troy, N. Y., and they have already received in the *Photographic World* for February, our congratulations on the happy result of the contest. Had the decision been otherwise, every photographer in the land who makes use of a sliding plate-holder, or any other method of multiplying pictures on one plate, would have had demands made upon him for the use of such a contrivance, and be compelled to meet any exactions the patentees, angry and vexed over the losses brought upon them in the suit against them, might choose to make. Moreover, if objection should be made by any one, then it was the plan of the owners of the patent to place one of their patent cameras, as near to the gallery of the objector as they could, and by all the means in their power ruin him and run him out of the town he was located in.

Photographers of the United States, thanks to Mr. Schoonmaker's persistence and pluck, you have therefore escaped a grievous imposition that would, but for him, have been brought to bear upon you with most exacting force, and have been even more terrible, grievous, and intolerable than its companion, the Bromide Patent.

We promised to give, from Mr. Schoonmaker, a little synopsis of the case, and we now append it. He says,

"As near as I can remember, A. E. Alden, one of the 'itinerant' photographers or tintype makers, for that is his forte, came here in the spring of 1866, and opened a 'tintype shop.' He began to advertise that he 'owned the Wing patent plate-holder, and was the only one authorized to make the genuine patent tintypes.' No one seemed to take any notice of him nor to reduce the prices in tintypes, notwithstanding he at once reduced the prices to half what others had been charging. He had things all his own way, but was not satisfied with this, and engaged his lawyers, or patent solicitors, or whatever they might call themselves, to write to us (nine galleries) in an insolent and commanding manner, to step up to the captain's office and settle for past infringements in thirty days, and procure license to use the multiplying camera or plate-holder for the future, or we

should be 'made to know that a patent by the United States meant something.' We paid no attention to it. In about six weeks, we received another notice from the said lawyers, giving us just ten days to settle. In the meantime I had discovered that Mr. Alden was doing a gift enterprise business without a license, and subject to heavy fine and imprisonment, but he, after finding that we meant to prosecute him if he did us, went to the United States Assessor and played the baby, and said he was ignorant of the law, and wanted to be let off by paying the usual fifty dollars fee, and asked to have his license dated back to cover all violations, which the United States official did, contrary to law or custom. He all at once made up *his* mind that *he* did not want to fight *us*, and insisted that as Mr. Wing had promised to sustain him and his patent, that he must sue us and bring us to terms. This little circumstance so irritated Messrs. Alden and Wing, that they made up their minds that I was at the head of it all, and that I was to be prosecuted first, and I was to be charged five hundred dollars, when others who had infringed more were to be charged seventy-five and one hundred dollars. That was the first and the most foolish mistake they ever made, for they have found to their sorrow that it was the wrong individual they prosecuted; that it would have been better to have given me a free license and five thousand dollars to keep out of sight. But when men commence malicious persecution without right or justice on their side, they sooner or later come to grief. But Wing mustered up the requisite courage and sued me in the spring of 1867, and commenced taking evidence, which in the United States Court you can do anywhere you can find a United States Commissioner. They put on the stand a pliant tool of theirs, named C. G. Hill, who had been to work in my gallery, and was an intimate friend of Wing's, from Boston or Lynn. They got through taking their evidence in a short time, and thought that as they had proved infringement by Hill, that that was all there was of the case, and that I would come right down with the five hundred dollars, when they would herald it over the country as another case decided for them.

But, says I, hold a bit. I often did this problem of multiplication myself away back in 1848, and all the way down to 1854, before I ever heard of your invention. I know of others that used it even earlier than this, and we must have their testimony. So I commenced to get them to Troy, and when I could not get them to Troy, I went where they were. I commenced with Mr. Thompson, at Albany, who used a sliding plate-holder in the winter of 1847, then with Parsons, who did the same in 1850. He also made boxes for others. George W. Pine invented a plate-holder identical with theirs in 1852, used it all over the United States, in Georgia, North Carolina, and Alabama, Missouri, and New York. Meade Brothers used it, but as they were dead, I had to rely on others that saw them use it in 1849. Henry J. Lewis made a model for Woodbridge & Co., in 1849, which covers the same principles, and was patented in that year.

"Alexander Beckers made precisely the same plate-holder in 1852. R. H. Dewey, of Pittsfield, Mass., did the same thing in 1852. George McGown, of Kingston, used the invention in 1852, taught others to use it in various parts of the country, bought his box at Myron Shew's stock house, in Philadelphia. Jas. Sinsabaugh, of Geneva, N. Y., made two pictures on one plate, away back in the fall of 1846. What was more than this, we produced the identical pictures made at that time. That was a sticker for them, for it went back beyond their earliest efforts.

"L. C. Everett did the same thing in Danbury, Vt., in 1847, and taught six or eight others. Chas. Moyer, of Charlestown, Mass., made pictures in the same way in 1848 and 1849, and for years afterwards taught several the secret. Frederick Seibert brought a multiplying box from Prussia in 1852, and used it in this country.

"We took the testimony of Mr. A. Hesler, in Chicago. We took testimony at Memphis and Nashville, Tenn., that of Messrs. Balch and Seibert. Also at Louisville, Ky., of Elrod. We sent to England for the *London Photographic Journal*, where was published Latimer Clark's invention for taking two stereoscopic pictures with one lens with a sliding holder. This was repub-

lished in this country, in Smith's *Journal* in 1853.

"We got from Paris, M. Claudet's revolving camera box, where there was a dozen plates brought in the field of the lens, successively, covering the same principle. This in turn, was also illustrated and published in this country long before Southworth or Wing made application for their patents. The getting together of this mass of evidence was no easy matter, and getting models made to represent every shade and style of sliding plate-holders and boxes until I had enough to fill a two-horse cart, was more trouble. This consumed nearly eighteen months, when we were ready. The case was reached and argued at Albany, before Judge Nelson, of Coopers-town, who rendered a most righteous decision (which you have published*), rendering their patent null and void. This rather astonished them, for they thought as they had one decision by a judge over in Maine, where the case never was fairly presented, or any evidence of importance introduced, that all they had to do was to rely on that, and that Judge Nelson would not look the evidence over, inasmuch as he had a precedent set for him to follow. But Judge Nelson was a different judge, and he intended to decide this case according to the evidence produced, and he did so, to their utter astonishment. All they ever hoped to gain this case on was the point that in 1847 or 1848 they invented or partly completed a frontboard to a camera box which would move the lens over the plate, with diaphragms in front of their plate, then by moving the lens from one corner of the plate to another, and shifting the diaphragm to correspond, taking the plate-holder out of the box each time, they could make several pictures on one plate. This was no plate-holder such as they patented in 1855. But they (Southworth) swear they never completed that invention, but kept it a secret, and finished what they called a sliding 'plate-holder' in the fall of 1854. Here Judge Nelson confined the date of his invention, but before this time, I produced fifteen or eighteen witnesses, all

over this country and Europe, who used this invention in every conceivable way. But the Sinsabaugh box and plate-holder of 1846, would have killed his 1847 arrangement, even if the judge had let him hang on an invention eight or nine years in process of completion. But the decision was given against them, and they thought that as I had spent so much already, that if they carried it up to the Supreme Court at Washington, that I would not spend any more money, and that I would let it go by default; but they reckoned without their host. I made preparations to meet them there, and force them to meet the case when it was first reached. So they finally bolstered themselves up to the final struggle by engaging the best legal talent the land offered. But it was of no avail. The common sense of the court could too easily see through their shallow pretence, and notwithstanding all this array of legal eminence, they stooped to low pettifogging trickery, and tried to fool the Supreme Court. They brought an immense solar camera lens, and by a sliding apparatus fixed in front of the court, threw their figures on a screen, and by sliding the lens one side distorted the figures of the court, and thus tried to make the court believe that no picture, unless made in a direct line with the lens, was perfect. But we soon dispelled this idea by producing a large grouped picture of the court, made as they sat on the bench, and showing that those on the ends of the plate, which were taken in the most obtuse angle, were the most perfect, dispelling their amusing idea at once. Their object in this was to destroy the Sinsabaugh instrument, as the pictures made with this instrument were made at a slight angle with the straight line of the lens, but this was all waste ammunition, shot at a dead cock in the pit. I hope they will now settle down and try and earn an honest livelihood, and confine their genius to something they can comprehend, or something that does not 'consume nine years of hard study' to complete."

This account is *truth*, modestly and mildly stated, by one who almost ruined himself, (and whose ruin was sought) to defend his fraternity. The counsel for the patentees

* *Photographic World*, Feb. 1871, page 60.

repeatedly told him that they would have the house he lived in before they were done with him. Still he persisted, and fought, and labored, in a way no one can tell except those who have been through the anxiety and vexation of a patent suit.

Now, how shall we, dealers in photographic goods, and photographers, for *all* of you have been saved money and time by Mr. Schoonmaker, how shall we thank him and repay him? To say nothing of time, he is \$3500 out of pocket. An appropriation of \$300 has been made him by the National Photographic Association. The Pennsylvania Photographic Association have appropriated him \$150, with the promise of more. Who will add to it? Mr. Albert Moore, Treasurer of the N. P. A., No. 823 Wood Street, Philadelphia, has consented to receive contributions for the purpose of reimbursing Mr. Schoonmaker. Be generous, as he has been generous, and respond liberally, *and at once*. All contributions will be acknowledged in these pages, and those who can appreciate a good action will have their names recorded. Do all you can.

NOTES IN AND OUT OF THE STUDIO.

BY G. WHARTON SIMPSON, M.A., F.S.A.

Rembrandt Effects—Washed and Fumed Sensitive Paper—A Novelty in Portraiture.

Rembrandt Effects.—Will you allow me, at the opening of this month's "Notes," to acknowledge the courteous letter addressed to me in your last by Mr. Kurtz, in which he so ably defends the style of portraiture known as "Rembrandts," with the introduction of which his name is so honorably associated. I have read this letter, and the remarks by Mr. Kurtz, in the article preceding it, with much pleasure. His position is so good and his advocacy so able, that extraneous aid is scarcely necessary. But I may remark, that I cordially agree with him in almost all he advances on this subject, both in relation to the effects and their nomenclature. The name is not, as far as I can see, open to much objection. It is striking enough to attract attention, and is not inappropriate. Rembrandt was a great

master of light and shade, delighting in the magic brilliancy obtained by a small proportion of light amid masses of half shadow and deep gloom. In the Rembrandt portraits, flesh and light draperies are kept, as much as possible, in mezzotint, instead of a tint light enough to rob them sometimes of roundness and detail, and render them chalky, a style too common in photography. There is generally a small portion of pure light, which, by its concentration, gives a Rembrandtish character to the picture.

If it has no other good effect, the attempt to produce these pictures must have a valuable educational influence. It will familiarize photographers with the possibilities of light and shade, which working in the common rut or beaten track, would never have revealed; and it will teach them that pictorial effect may be obtained without the introduction of the incongruous accessories which Mr. Kurtz so properly denounces. Of course it will follow that some odd and absurd results will be produced at first by the injudicious application of the Rembrandt style; but there is no argument against the use of a thing so unfair and fallacious as the reference to its abuse, as though such abuse were the necessity and the rule, instead of the accident and the exception. The truth here, as in many other matters, is found in seeking the *juste milieu*. Mr. Kurtz has introduced a very effective style of portraiture, which, in his own hands, we feel sure will never be misused. He has also suggested to many of his brethren that photography is capable of much more variety of effect than they imagined; and, in trying their new-found power, some of them may possibly, at times, produce curious incongruities. This certainly derogates in no wise from the value of the novelty, which, judiciously used, is effective and pleasing, and affords much scope for the exercise of taste and judgment in portraiture. I shall look for the dozen copies of his ordinary work he kindly promised to send me with much interest, and shall have pleasure in reporting thereon after examination.

Preservation of Washed and Fumed Sensitive Paper.—The use of sensitive paper

from which the free nitrate has been removed by washing, sufficient sensitiveness being obtained by means of fuming with ammonia, still continues to find favor here. Col. Stuart Wortley recently communicated to me an important fact in illustration of the value of the process. He says:

"During the late hard frost my printing was entirely stopped. It so happened that many prints remained half printed in the various frames when operations were first suspended. After the lapse of sixteen days printing was resumed, and the frames with the unfinished prints were put out and finished. They toned perfectly, and are now not to be distinguished from prints printed and finished within twenty-four hours. You know my opinion of the great value of the washed and fumed paper; but I was hardly prepared for the fact that the effect of the ammonia would have enabled a print partly commenced to finish perfectly after the lapse of sixteen days.

"There was, of course, no means of supplying fresh ammonia, and the only ammonia used was that which started the prints at the commencement."

A Novelty in Portraiture.—A novelty in portraiture of an unimportant kind, but sufficiently quaint and uncommon to be of possible interest to some of your readers, was recently brought under my attention by a friend who received a similar portrait, from France, a few months ago. This portrait is intended for use as a visiting card, for which the carte de visite was clearly neither intended nor fitted. Here a card,



the size of a lady's visiting card, containing the name and address of the owner in the usual manner, has the top left-hand corner turned down—or, rather, ostensibly

turned down—to receive a small medallion portrait on the triangular piece formed by the fold of the corner. The medallion is oval, about the size of a shilling, or less, and contains, of course, just the head and bust. The turned down corner, as we explained, does not actually exist; but the effect is gained by cutting off the top left-hand corner, and printing on the card the lines, forming a right-angled triangle, which the piece would form if turned down. At first glance, the effect is given of an actually turned down corner. The size of the triangular space formed is just sufficient for such a medallion as I have described, the base and upright of the triangle each being an inch and three-quarters long. In the example I send you the name, address, and lines are lithographed. The novelty is not, as I have said, a very important one, nor one likely to come extensively into vogue; but as the result is uncommon, it may please many, and, at any rate, is a thing easily tried; and any novelty which in any degree stimulates portraiture will probably be found a boon by any of our readers.

A good idea for the members of the N. P. A. Messrs. A. M. Collins Son & Co., Phila., are about getting out some pretty styles.—ED. P. P.

GERMAN CORRESPONDENCE.

Art and Photography in Italy—Steinheil's *New Lens*—Albert's *Lichtdruck*—Bierstadt's *Pictures of the Yosemite Valley*.

AFTER shipwreck and a solar eclipse, with a hailstorm as an accessory, I am safely back in Berlin, in spite of snow and ice. With such drawbacks the photographic result of my trip is of course of little moment, but we can always learn something if we only keep our eyes open; and, starting with this principle, I was able to observe many photographically interesting objects. It is said that Italy is the home of art, and it might be supposed that the youngest of the arts—photography—would occupy a position worthy the art-reputation of the country. But this is correct only so far as the past is concerned. The Italy of our day has no good artists. Raphael, Michael Angelo, Leonardo, Ghiberti, Guido Reni,

and a host of others are no more. The proud palaces of Sansovino have gone to decay. The former splendor of the old Roman empire offers a still sadder spectacle.

Nothing is left but gigantic ruins, mutilated statues, and faded frescoes. But these mute stupendous ruins speak a language of tremendous power. They tell of deeds of heroism and horrible crimes, of pomp and splendor, as well as of the squalid misery of ancient times. They impress upon us this world's history more forcibly than large folios, and all those ruins still retain the lustre of the unreachd beauty of antique art.

The disciples of art wander amongst these ruins. They leave, and are elevated by their study.

Our own time, by its grand inventions, is far in advance of ancient Rome, still in the realm of art it fails to approach it. We are imitators, and must remain so, and may consider ourselves fortunate that photography has given us the means to reproduce the art-treasures of antiquity with inimitable fidelity. There is hardly an antique remnant which the camera (and it, too, is an Italian invention) has not delineated, and the photography of Italy is devoted almost entirely to this class of work.

Pictures of all sizes are offered for sale at fabulously low prices. Pictures 8 x 10 inches are frequently offered for twenty cents, and, withal, tolerably well executed. The fact that the cost of labor is exceedingly low, and that imperfect prints are sold without compunction (which, considering that the multitude possesses very little taste, is not to be wondered at), explains this.

To please the public taste, extraordinary and almost impossible things are represented. I saw for instance, in Naples, a photographic picture of an eruption of Vesuvius; also a photographed ascension of the mountain, and an interior view of the Blue Grotto. An expert could see at once that these pictures were copies of drawings, but the public demanded them and bought them. *Mundus vult decipi.*

Another kind of pictures with which a Roman photographer here made his fortune are moonlight views of the Coliseum. It has become fashionable to view the rem-

nants of the walls of the colossal amphitheatre by moonlight; and it is easily understood that photographs by moonlight, to be taken home as remembrances, found a ready sale. The secret of their production has been explained long ago; a negative against the sun is taken, with very short exposures, and printed very dark.

Otherwise we must admit that architectural photographs of imposing size and excellent execution are made in Italy. Sheets of from 20 to 30 inches are nothing unusual. With the above-mentioned low prices a splendid finish cannot be expected; generally they are pasted on very thin cardboard; and frequently, in order to facilitate packing, they are not mounted at all.

In portraiture very little is done; and perhaps, of all the countries of Europe, Italy has done the least towards the advancement of photography. The education of the people is of a very primitive character. No wonder, then, that foreigners have usurped the business, and English, French, and German photographers have gained reputation and money.

As photographic productions of an extraordinary quality the pictures of Mr. Braun of Dornach (Alsace) must be considered. He had the courage to take direct pictures of the darkened frescoes of Michael Angelo in the Sistine chapel. He employed the plan proposed by myself of throwing sunlight on them by means of reflectors, and the result is admirable. His sheets made by the carbon process have been published; they are very little known; but we will hope that, with returning peace, they will become more generally appreciated.

But, notwithstanding all the interest which Italy offers, the season for travelling was too unpropitious. The entire absence of all heating arrangements made even a moderate cold very uncomfortable. It is no pleasure to go to the dinner-table of the first hotel in Florence with overcoat and furs on, and I felt very well contented to return over the snow-covered Alps to my cold northern home.

I soon reached Munich, and could not let the opportunity pass of calling on Steinheil, Albert, and Obernetter. I found all the three establishments in full activity. It

made a most favorable impression on me, when coming from the lazy Italy which only lives in the past, to be placed at once in the busy presence of the new-born German empire, where, in spite of war, flourishes art, trade, and commerce as never before. Theatres, concerts, balls are frequented as in the midst of peace. Gambetta, who, ten days ago, declared that trade and commerce were prostrated in Germany, that social life was dead, &c., should have paid a visit to a Munich beer saloon before making such an assertion; he probably would not have babbled such nonsense. Munich beer and Munich art are considered standard in Germany; perhaps both stand in "Consal nexus;" and hence we must not be surprised to meet here with some new discoveries in our art.

To these I must add a new wide-angle lens by Steinheil. There is no doubt that Steinheil has made a very lucky hit with these instruments. By calculation he has succeeded in demonstrating that by slightly reducing the aperture of the ordinary aplanatic lens, the field of view will be materially increased; and thus he succeeded in constructing a new wide-angled lens, which delineates almost absolutely correct. This lens excels even all the other wide-angled lenses, by the extraordinary amount of light which it possesses. The lens is particularly intended for taking pictures at short distances, and for copying drawings. It admits of the employment of small ateliers and short cameras. With every lens a prism is furnished (it serves to give reversed pictures, so far as right and left are concerned). In this manner negatives, which can be used at once for the Woodbury and Albert processes, are obtained.

The price of a lens and prism is no higher than that of the old aplanatic lens of the same size without prism; but the new lens is of course inferior to the old one in the intensity of light, and not suited to portraiture.

I have in a previous letter reported on Obernetter's "Lichtdruck." Albert works for the war on a large scale. War maps and pictures of the war are made by thousands. The negatives, which necessarily must be reversed, are obtained by a very simple

process. A negative is taken in the ordinary way, and a sheet of gelatine is placed on the still moist collodion film, and the plate left to dry; when dry it is detached from the plate and made transparent by means of wax; an excellent reversed negative is made in this manner. The maps which are made from these negatives leave nothing to be desired. The direct printing on Bristol board must be considered as a great improvement in Albert's process. It obviates the tedious and expensive mounting. On chalk-paper, pictures are furnished which are in no way inferior to silver prints.

Formerly chalk-paper was affected by water. This has been remedied long ago. A slight coating of varnish makes the picture impervious to water, and gives to it at the same time a gloss equal to albumen paper.

Albert is indefatigable in his endeavors to improve his process. Numerous "light-printers" have since started; but to Albert remains the merit that he was the first to use glass plates as the foundation, and at the same time to use an intermediate film between the glass and gelatine, in order to secure a more perfect cohesion. The former circumstance gave to his prints that remarkable fineness which neither Tessie de Mothay nor Poitevin have ever obtained (both of them worked with metal plates). The second point gave to his plates an extraordinary durability. The other "light-printers" were only able to accomplish anything after these processes of Albert became known.

But, while speaking of Europe, I must not forget America. Almost weekly I receive gifts from the United States. They afford me the greatest pleasure. The only thing which I have often to regret is that the name of the donor does not accompany the present, and I do not know to whom I am indebted for the pleasure.

Fortunately this was not the case with a splendid collection of stereos, sent by Bierstadt, of Niagara, and which, not only by the subject which they represent, "the giant rocks and giant trees of the Yosemite Valley," but also by their masterly execution, excited the admiration of our photographic society.

When I penned my letter for your December issue the cannon announced the fall of Metz, the bulwark of France; while I close this one the thunder of artillery strikes again my ear, victorious hurrahs fill the air, and the flags are once more flung to the breeze. "Die Wacht am Rhein" has fulfilled its mission. Paris, the centre of the world, the new Zion, the city of cities, is ours. After a few weeks the war will be over, and peace will once more smile upon the peoples of the Old World.

DR. H. VOGEL.

TESTING OF SILVER SOLUTIONS.

BY JAMES F. MAGEE.

The Actino Hydrometer.—Dr. Vogel's "Silver Tester."—Dr. Pile's Volumetric Silver Test.—Easy Method of Testing.

It often happens in the practical, everyday working of a gallery, that it becomes necessary to know the strength of the several solutions of nitrate of silver employed.

If too weak, unsatisfactory results are obtained, and if too strong, silver is uselessly wasted; in either case difficulties arise which are frequently attributed to other causes.

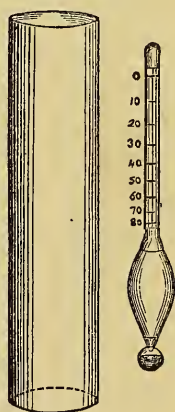
The instrument generally used to give this information is the actino hydrometer, and although it is strictly correct in the testing of pure silver solutions, is very unreliable when these solutions have been for some time in use. It is noticed by those using it, that a bath working well when the hydrometer indicates 40 grains to the ounce, will after a time not be in the same good condition until it marks 45 grains or more. The reason of this is, that this instrument shows only density or specific gravity.

It is well known that different bodies of the same weight are of different sizes, and again, that bodies of the same size have different weights, as for instance, a pound of lead is smaller than a pound of wax, and a piece of lead weighs more than a piece of wax of the same size. When the weights of different bodies are compared to the weight of equal volumes of water we have what is called their specific gravity. The specific gravity of gold is 19.3, that is 1

cubic inch or foot of gold weighs 19.3 times more than a like bulk of water, and when the specific gravity of an acid is given as 1.4 it means that a cubic inch, or a pint or any other measure of it weighs 1.4 times more than an equal measure of water. We have in the hydrometer a quick means of finding specific gravities of liquids. If we float it in liquids of different densities, it will sink to different depths in them, but always so far until the weight of the volume of displaced liquid equals the weight of the whole instrument. As hydrometers are used for various purposes, the scales are divided differently, some to indicate specific gravity, others to give the different percentages of alcohol, or to give strengths of acid, &c. As the same liquid varies in density according to its temperature, it is necessary to have a standard, which is usually 60 degrees Fahrenheit, and all solutions should be made of the proper temperature before testing.

The scale of the actino hydrometer is prepared in the following manner. It is first floated in pure water at 60 degrees Fahrenheit, and the point to which it sinks marked (this is the zero of the scale. See Fig. 1). It is then placed successively in solutions of the same temperature containing 10, 20, 30, &c., grains of nitrate of silver to the ounce, and the different points to which it sinks carefully marked. These points are, when the scale is to indicate 1 grain for each degree, the 10, 20, and 30 degrees, &c., of the scale. The intermediate single degrees are put in by simply dividing off into 10 equal spaces. This instrument thus prepared can be used to test any other pure solution of a soluble salt, but as these solutions vary very much in density when containing the same number of grains of the different salts dissolved in them (for example, a solution containing 20 grains of chloride of ammonium does not test the same as one

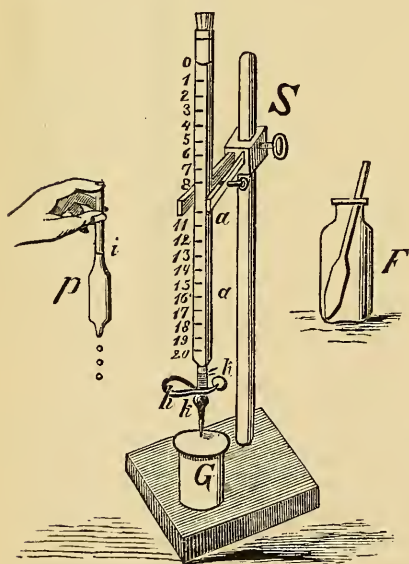
Fig. 1.



containing 20 grains of hypo soda), a table of corrections is required. Such a table accompanies Tagliabue's actino hydrometer. The instrument has no discriminating or selecting power, hence if the two solutions just named were mixed together, no table could be made which would give from the indication on the stem the number of grains in the one, and the number of grains of the other contained in each ounce of it.

When a silver bath is new, the reading of the hydrometer can be relied upon, but in working, as every plate abstracts silver by the formation of iodide and bromide of silver in the collodion film, and adds nitrates of potassa, cadmium, &c., according as iodide and bromide of potassa, cadmium, &c., have been used as excipients, we have an impure solution in which the above salts as they increase its density test by the hydrometer as so much silver, and we cannot tell from its indications how much nitrate of silver alone it contains. The older the bath, the more impure the solution and the more unreliable this manner of testing becomes.

FIG. 2.



There are, however, methods by which we are able to ascertain the quantity of nitrate of silver in any solution, pure or impure, one of the most accurate of which

is the one introduced by Dr. Vogel. His "silver tester" consists of a stand *S*, a burette *a*, two pipettes *p* and *F*, and a beaker glass *G*. A solution of iodide of potassium is prepared, containing in 1023.4 cubic centimetres of water, exactly 10 grammes of pure dry iodide of potassium. 100 cubic centimetres of this solution precipitates 1 gramme of nitrate of silver, so that if 1 cubic centimetre of a silver solution is measured off and tested, every cubic centimetre of the test solution used gives 1 per cent. of nitrate of silver (1000 cubic centimetres = 2.11 pints and 1 gramme = 15.4 grains). This prepared solution is placed in the burette *a*, which is divided off into cubic centimetres and furnished with a pinch-cock *k*. The pipette *p*, is then dipped in the silver solution to be tested, filled, by drawing with the mouth at the upper end, to the mark *i*, which is an exact cubic centimetre, and the solution allowed to run into the glass *G*. Into the same glass *G*, is placed 1 or 2 cubic centimetres of prepared nitric acid, using the pipette *F*. (This nitric acid contains 1 grain protosulphate of iron to every 2 ounces of pure acid.) And finally 10 to 14 drops of a prepared starch solution are added. (This solution is made by rubbing up $\frac{1}{8}$ oz. of starch to a thin paste with distilled water, pouring it into 12 $\frac{1}{2}$ ounces of boiling distilled water, and stirring for several minutes; after settling for a few hours, the clear solution is poured off and 2 $\frac{1}{2}$ ounces of pure pulverized nitrate of potassa added, when it is ready for use, and will keep undecomposed for about six weeks.) The solution in the burette *a* is then allowed, by pressing open the pinch-cock, to run into the glass *G*, until the blue color which is produced does not disappear by shaking, but remains permanent. With a little care at the close of the testing, a single drop will be found sufficient to produce this permanent blue color. A simple reading of the number of cubic centimetres of solution used, gives the per cent. of nitrate of silver. Thus, if it stands at 7 $\frac{3}{4}$, the tested silver solution contains 7 $\frac{3}{4}$ per cent, that is, 100 cubic centimetres of solution contains 7 $\frac{3}{4}$ grammes nitrate of silver, which is equivalent to about 35 grains to the ounce.

Dr. W. H. Pile, of Philadelphia, manufactures a "volumetric silver test," which is much simpler than Dr. Vogel's,

Fig. 3. as it consists of but a single tube, and is almost as correct. In using it, it is only necessary to fill the tube (Fig. 3) to the point O with the silver solution to be tested. Then add the test solution (made by dissolving 140 grains of well-dried rock salt in one pint of distilled water at 60° Fahrenheit, and adding to the clear solution 2 grains of bichromate of potassa), freely at first, afterwards gradually, closing the tube with the thumb and shaking well after each addition, until, after allowing the precipitate to settle, no more cloudiness is produced by a drop of the test. The level at which the liquid in the tube stands gives the number of grains of nitrate of silver contained in each ounce of the solution.

There is an "easy method of testing," which is within the reach of every photographer. The only articles required being an 8 oz. narrow-mouth bottle, a graduate glass, and some common table salt.

The test solution is made by dissolving 55 grains of well-dried salt in one pint of water. Measure into the 8 oz. bottle $\frac{1}{2}$ oz. of the silver solution, and add the test solution to it carefully from a clean graduate glass, shaking well after each addition, until no cloudiness is produced. If it takes 1 oz. of this solution, it contains 10 grs. of nitrate of silver to the ounce; if 2 oz., it contains 20 grs.; and so also of fractional parts; $3\frac{1}{2}$ oz. shows $31\frac{1}{2}$ grs.; $3\frac{3}{4}$ oz. 35 grs., &c. As every 1 oz. of solution used shows 10 grs. of nitrate of silver to the ounce, it is only necessary to multiply the number of ounces and parts of an ounce by 10 to give the required result. A 2 oz. graduate glass is the best size to use, as it is so graduated as to show $\frac{1}{2}$ oz. readily; and as every $\frac{1}{2}$ oz. of test solution equals $1\frac{1}{2}$ grs. of nitrate of silver, this test is sufficiently accurate for all practical purposes. If about the number of grains in the solution is known, add at

once nearly the required quantity of the test, and afterwards small quantities at a time. Supposing it to contain about 40 grs., add $3\frac{1}{2}$ oz. of the salt solution, shake well, and towards the latter part of the process it requires hard shaking to get the chloride of silver to precipitate out and leave the liquid clear. Then add from an exact measured ounce about $\frac{1}{8}$ oz. at a time, until the precipitation is complete. Add the quantity used to the first $3\frac{1}{2}$ oz., multiply by 10, and we have the number of grains of nitrate of silver. It frequently happens that, before sufficient of the salt solution has been used, that the precipitated chloride of silver is quite bulky, but when shaken up, after the addition of the last required quantity, it becomes much denser and settles rapidly to the bottom; this is a good indication of enough solution having been used. One or two trials of this process will give all the experience required to enable any one to do it easily and quickly.

If the silver solution contains ammonia, an ammonio-nitrate solution, as it is termed, after measuring off a $\frac{1}{2}$ oz. of it into the 8 oz. bottle, make acid with a little pure nitric acid, and then proceed in precisely the same way as above explained.

Dr. Vogel's, Dr. Pile's, and the "easy" methods cannot be used if the solutions contain salts of lead or mercury; but as these salts are not used by photographers, it is not necessary to give processes by which such solutions can be tested, requiring, as they do, some knowledge of chemical manipulation.

THE PHOTOGRAPHIC WORLD.

THE January number of the *World*, seems to have met with general acceptance which, of course, we are thankful to hear. We append a few of the notices which have come to our hands:

"From the advance sheets with which we have been favored, the *World* seems to promise as much excellence as its older brother, the *Photographer*."—Mr. G. Wharton Simpson, in the *Photographic News*.

"To the publishers and editor of the well-known magazine, the *Philadelphia Photographer*, which is now in the eighth year of

its useful and successful career, the photographic profession is indebted for this last elegant addition to its literature. To those who are familiar with the *Philadelphia Photographer*, and we presume very few indeed of the profession in this country are not, we cannot more highly commend this new candidate for their favor than in stating, that both in style and matter, it is fully equal to the older publication, to which it is henceforth to be the 'companion.' The chief novelty which the present number introduces to the public is a photographic print, made in this city by the 'Woodbury Photo-relief process.' This process, the features of which are very fully explained in a long and interesting article, is generally conceded to be the most valuable of recent improvements in the art. The specimen in the *World* speaks for itself. The subject of the picture is George W. Childs, Esq., of whom a biographical sketch is given in a supplement. As samples of the general contents of the number, we may cite the following titles of articles: 'Photography Abroad,' 'On Lenses, Diaphragms, and Focussing,' 'Enlarged Photographs by means of the Lime Magnesia Light,' 'Notes In and Out of the Studio, by G. Wharton Simpson,' 'Position and Composition,' 'A Few Remarks on Back-grounds,' &c., &c.

"The 'Table-talk' comprises a variety of valuable notes and hints."—H. Howson's *Journal of Industry*.

"The present number of the '*World*' is illustrated with a fine photographic portrait of George W. Childs, of the *Ledger*. To all who practice photography, these publications of Benerman & Wilson are of inestimable value, and the perusal of them will give new interest and a vast deal of information to all who find pleasure in the art which is now taking the place of most other modes of pictorial representation."—*Philadelphia Age*.

"The *Photographic World* promises well. It is gotten up with taste and edited with ability, and to those interested in the progress of the photographic art, it will doubtless prove very interesting."—*Pittsburgh Dispatch*.

"A COMPREHENSIVE WORK.—The initial number of a handsome and solid-looking magazine, entitled *The Photographic World*, has reached us in usual course. As indicated by its title, it is dedicated to the dissemination of the science of photography. The price of the publication is five dollars a year. In the ordinary way of procuring them, the photographic illustrations, as promised, must alone be worth the price of the subscription."—*Sunday Mercury*.

"We have received the first number of a handsomely printed illustrated monthly periodical entitled *The Photographic World*, published by Benerman & Wilson, and designed for the improvement of artists and the photographic art. The excellent likeness of Mr. Childs will long be cherished by his many friends as a valuable keepsake."—*Sunday Times*.

"I am hearing from your '*World*,' and all unite in hearty praises of your success."—Geo. W. Childs, Pub. *Philad'a Ledger*.

"Continue to wield the graphic light of the *World* as you have commenced, and all of us who derive pleasure and profit from its radiations will thank you if we can do no more."—Dr. T. R. Peale, *Examiner Photo. Dep't, U. S. Patent Office*.

Many more such as these above, have come to our hands from those who have subscribed for the *World*, which space compels us to omit. Some seem to fear that in publishing two journals, we 'will weaken the old favorite, and deprive it of its value in a measure.' Not a bit of it. Fear not. Every year the photographic profession becomes more liberal in advancing ideas and items of practice, and in communicating them for the general good, so that our pages were too few to contain even the best that was given. Consequently, the profession is becoming more and more enlightened, and demand more knowledge. This we are willing to give them liberally, and only ask their support in our project. We will then guarantee you, that *both journals shall be better hereafter than the old one ever was*. Two issues of each are now before you, and we ask you to examine them critically, and frankly tell us how we may serve you still further. A sample copy of the

World has now been sent to all our readers whose address we have. One dollar only will secure you the February and March numbers in addition. Will you not try us that long at least?

Dr. Vogel's New Handbook of Photography.

A GREAT deal more labor has attended the production of Dr. Vogel's admirable "Handbook of Photography" in English, than we anticipated, and delay was consequently unavoidable. It had first to be rearranged and revised to suit the American reader, by Dr. Vogel himself, during his visit to America, and then translated by a German amateur friend, Mr. Edward Moelling, into English. Other hands then had to "take the German out" of the translation, thus requiring *three* parties to go carefully over the whole before a page could be put in type. Now, however, the book is being printed, and part of its bright pages, fresh from the press, lie before us, full of excellent information, written in the author's well-known and acceptable style—clear, concise, practical to an eminent degree, and full of that freshness which constant contact with photographers and actual practice always secures. Still we must not review the work until it lies completed before us. The publishers promise it by March 25th, so that in our next issue we will be better prepared to say exactly what it is. Meanwhile, we extract the following from a lengthy criticism of the "Handbook of Photography," of Dr. Vogel, published in the *Bulletin Belge*, by Dr. D. Van Monckhoven:

"The practice of photography, which constitutes the second part of Dr. Vogel's great work, is worthy of his name and his experience. The master reveals itself on every page. In every case, the description of the photographic processes is given with a clearness of expression, a precision of ideas, a display of judgment in the selection of methods, such as I have never seen before. It is a work which every one should have, which every one should consult. As for myself, I have read it to advantage; I have learned a great deal from it. For the author, I entertain the highest esteem."

The Photographical Section of the American Institute, New York.

THE monthly meeting was held on the evening of February 7th. Mr. Henry J. Newton in the chair; Mr. Oscar G. Mason, secretary.

After reading and approval of the minutes of the last meeting, Mr. H. T. Anthony, chairman of the Committee on Illustrations, reported that the committee had procured apparatus for showing negative and positive photographs upon a large screen by the oxyhydrogen light, which was ready in an adjoining room.

The Secretary then read a report of the donations which had been made to the Section during the year 1870, and before taking his seat remarked, that he wished to call the attention of the members to an important matter, which, he believed, was of interest to *every* photographer, namely, the extension of the Woodward Solar Camera Patent, for which application had been made. He believed that the claim of originality was not well-founded, but that it was one of that class of adaptation of old instruments to a new use, patents upon several of which had been imposed upon the profession.

In the early days of photography its practice was taken up by many who had but very little knowledge of optics and the application of its laws in other departments of science and art; thus enabling better informed persons to take undue advantage of their fellows by laying them under heavy contributions, through the introduction of some old principle, under seal of the Patent Office.

As long ago as 1837 there had been published a work by Sir David Brewster, containing a plate and description of a solar camera identical with that patented by Mr. Woodward. The mirror, condensing lens, and objective occupying the *same relative positions* as in the so-called Woodward instrument. Woodward had not added a single item to it. He had merely substituted a picture on glass, in place of the small organic or inorganic object for magnifying and examination, for which the instrument was *originally* intended. And in place of

the screen of plain white paper used by the *real* inventor to receive the magnified image for examination or drawing, Mr. Woodward had substituted a sheet of paper made sensitive to light. That such was really the fact Mr. Mason plainly demonstrated by showing and explaining upon a large screen a diagram of the *original solar camera*, which he had photographed from the work to which he had referred.

Mr. Mason then offered the following preamble and resolutions:

Whereas, a patent for a solar camera was granted to D. A. Woodward, February 24, 1857, upon what is now believed to have been unjust claims as to originality of invention. And whereas we, the members of the Photographical Section of the American Institute, do believe that the extension of such patent would do great injustice to an important art-industry of the country. Therefore be it

Resolved, That we do respectfully enter our *earnest protest* against the extension of said patent.

And be it further resolved, That the Corresponding Secretary be instructed to transmit to the Commissioner of Patents at Washington a certified copy of this preamble and resolutions.

This was followed by considerable discussion by several members who seemed to be *interested* in the *ownership* of photographic patents or patented articles; and by one gentleman, who stated that Mr. Woodward was his "personal friend," and he "should therefore vote against the resolution." Another "thought it was against the dignity of the Institute to pass any such resolutions." Another "thought stockdealers would charge just as much for solar cameras as if the patent were extended." A third "thought the whole opposition a Philadelphia scheme, got up to make capital out of some of the members of the profession." It was finally lost by being laid upon the table.

The "dignity" and the "personal friend," and the "private interests" and the "Philadelphia scheme" being cared for, Mr. H. T. Anthony and others proceeded to exhibit, to them doubtless, more congenial pictures upon the screen, which, after the exhibition that had preceded it, seemed to

your correspondent—draw your own conclusions though—all
GAMMON.

PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.

STATED meeting held on Wednesday, Feb. 1st, at 8 P M.

Minutes of last meeting read and approved.

The room committee reported the prints sent in exchange from the Liverpool Amateur Photographic Association, as mounted and ready for inspection; also a new and suitable arrangement for the exhibition of the transparencies belonging to the Society.

Mr. Shoemaker, a member of the Pennsylvania Photographic Association, was then introduced, and presented to the Society, on behalf of Mr. Albert Moore, a handsome framed solar print, made from a negative, by the President, Mr. John C. Browne. A vote of thanks to Mr. Moore was moved and carried.

A discussion then took place as to the value for solar printing or ordinary photographic work, of the light in the various months of the year. Mr. Shoemaker expressed a decided preference for the latter part of the winter and early spring, saying that its actinic power was even greater than in June and July. This, he thinks, is owing to watery vapor in the air, evaporated by the heat of the sun during the warm months, but in February and March the light seems whiter, and the air more free from mist.

After adjournment, Mr. Shoemaker and Mr. Graves, of the Water Gap, Pa., entertained the Society, by exhibiting some glass positives in the lantern.

ELLERSLIE WALLACE, JR.,
Recording Secretary.

PENNSYLVANIA PHOTOGRAPHIC ASSOCIATION.

THE stated meeting of the Association was held at No. 822 Arch Street, on Monday evening, February 13, 1871, the President in the chair, and thirty-eight others present. After the roll call and reading of the minutes, Messrs. L. Walker, W. W. Taylor, John Booth, John H. Bostwick

(Bristol, Pa.), George W. Ennis (Nictown), and D. Hinkle (Germantown), were elected members of the Association.

Mr. Cremer, chairman of the Committee on Insurance, reported that the committee had decided to suspend operations until the members of the Association reached one hundred in number, which would probably be soon. Report was accepted, and the committee continued.

Mr. Wilson announced the defeat of the Sliding Box Patent, eulogized Mr. Schoonmaker for his admirable pertinacity and industry in bringing the matter to a final close, and hoped some action would be taken to partly remunerate Mr. Schoonmaker for his expenses of the suit.

It was also announced that application had been made to the Senate for the third or fourth time for a rehearing in the Bromide Case, but it was refused, and that patent may now be considered as having drawn its last expiring breath. The case of the Shaw and Wilcox Co. vs. Mr. Bogardus, was reported as progressing vigorously in New York, and the argument by counsel would probably take place in April. The hearing in the Solar Camera Extension Case had taken place at Washington on the 9th of February, and the National Photographic Association was there represented by H. Howson, Esq., who argued for the fraternity at large in opposition to the extension of the patent.

Mr. G. Schreiber, the regular appointee for reading a paper, was given further time. Mr. Charles Evans, volunteer, read a very interesting paper on the "Use of Iodides and Bromides,"* which was loudly applauded. He was followed by a volunteer paper on "Poser and Posing,"† by Mr. B. Frank Saylor, Lancaster, Pa., which was also applauded. Mr. Evans exhibited some very interesting prints illustrating his paper.

Mr. Clemons described a negative he had sent him for examination, showing curious opaque lines or markings on the end of it. Mr. Clemons said he removed the varnish, and found the defects were due to a surplus of iodide in the film. The plate had been

one of the first ones dipped early on a Monday morning, and it had been too dry before dipping, therefore the silver had failed to act on the iodide in the film, and there was no iodide of silver produced, hence the markings—the portion of the plate showing the markings had not been sensitized.

Mr. Cremer made an earnest appeal in favor of an appropriation being made for Mr. Schoonmaker, and the appointment of a committee to draft a resolution of thanks to Mr. S. Said committee also to collect funds to add to the appropriation of the Association. Messrs. Moore, Trask, Clemons, Rhoads, and others spoke in favor of Mr. Cremer's motion, and it was finally carried, the appropriation being made, \$50. A recess was then ordered, and the committee in a few moments got up a regular enthusiasm on the subject, and very soon reported \$100 additional collected, which announcement was received with applause. The Lantern Exhibition then followed.

Mr. Herman Roettger exhibited a new form of gas lantern, the results of which were highly gratifying.

Being made entirely of metal, and arranged in a very compact form, occupying a space of only 21 inches long, 8 inches wide, and 8 inches high, it at once overcomes a great objection heretofore experienced, that of requiring too much room. The case in which the instrument is packed is so constructed that the sides and ends which are hinged at the bottom fold down, thus forming a base or support for the lantern, which is secured to the bottom. The case, when closed, can easily be carried under the arm.

The lenses are made by Mr. Roettger, whose reputation as an optician is too well established to need praise here. The condensers are $4\frac{1}{2}$ inches, and the tube so arranged that, by simply sliding out one and slipping in another, the focal length can be altered from 15 to about 75 feet, producing a disk of 15 feet diameter, perfectly flat, the illumination and definition of all parts of which were perfect.

Prof. Warrington, who was present, at the request of the Association, subjected the instrument to very severe tests, and

* See page 92.

† Will be in March number of the *World*.

expressed himself highly pleased with its perfection.

Mr. Bell, Mr. Shoemaker, and others who had made slides, had them tested by this instrument, which proved its great value to the photographer, as well as the exhibitor and amateur. Several of the slides exhibited were made by the Woodbury process, which gives every promise of creating a new era in the transparent slides for lantern and stereoscopic use.

Mr. Roettger, who has given much study to the microscopic attachment for gas lanterns, several of which are in use in the University of Pennsylvania, Jefferson Medical College, and other institutions, has made one which by a very simple arrangement can be attached to this lantern in a few moments, producing results not heretofore obtained.

For the purpose of giving such members who make slides a chance to try their relative perfection, Mr. Roettger announced that he will frequently give exhibitions with this apparatus for the purpose of testing the various processes and the quality of their productions.

Mr. Marcy was also present with his excellent Sciopticon, and adjournment did not take place until after 11 P.M. The Association meetings are most interesting, and show what a little effort can accomplish!

USE OF IODIDES AND BROMIDES.*

BY CHARLES EVANS.

VARIOUS opinions exist as to which, iodide or bromide, is the best and most useful to sensitize collodion. Experiments to test the same have proved that the bases of iodides and bromides used have no direct effect on the beauty of the results or their sensitiveness, if they are used in the same proportions and conditions, so as to bring into the collodion the same amount of iodine and bromine. The different salts used to sensitize do not, weight for weight, contain the same amount of iodine and bromine, so that one salt will produce a smaller amount of iodide or bromide of silver in the

film than another. Taking the formula of ammonium and potassium as the standard, we have in 5 grs. of iodide of ammonium 4.38 grs of iodine, and in $2\frac{1}{2}$ grs. bromide of potassium 1.68 grains of bromine. Collodion salted with the above, with a 40 gr. bath, gives us good results, and may be considered always reliable. Many sensitize with the other salts in the same proportions as the above, without reference to the fact that they vary in the amounts of iodine and bromine they contain; they therefore do not produce the same results as with the formula of ammonium and potassium. Take iodide of cadmium, for instance, 5 grs. of which contain only 3.47 grs. of iodine, being 91 grs. less than in the iodide of ammonium; therefore, in using cadmium, if we wish to maintain the same strength, its quantity should be proportionately increased, as observed in the standard formula; so in the use of bromide of cadmium, $2\frac{1}{2}$ grs. of which contain 1.47 gr. of bromine, being .21 gr. less than in the same amount of bromide of potassium. The iodide and bromide of magnesium contain more iodine and bromine than any of the salts, and smaller proportions can be used. Ammonium, potassium, and magnesium collodions lose their sensitiveness in a short time, cadmium alone being an exception, producing a collodion which will keep for months, giving good results. In order to show the different effects when the various salts are used in the same quantity, without regard to their proportions, I have prepared several collodions, using the same iodide, but different bromides, and made negatives with each at the same time, with the same bath and developer. We therefore see, when using the different salts, the necessity of getting the proper amount of iodine and bromine into the collodion. The prints from the negatives will give you a better opportunity of judging of the effects produced.

The following table gives the proportions of iodine and bromine present in each of the salts used:

250 grs.	Iod. of Magnes.	contain	228 $\frac{1}{2}$ grs.	of Iod.
"	"	"	Ammonium	" 219 " "
"	"	"	Potassium	" 191 $\frac{1}{2}$ " "
"	"	"	Cadmium	" 173 $\frac{1}{2}$ " "

* Read before the Pennsylvania Photographic Association, February 13, 1871.

250	grs.	Brom.	of	Magnes.	cont.	217½	grs.	of	Bro.
"	"	"	"	Ammon.	"	209	"	"	"
"	"	"	"	Potassium	"	168	"	"	"
"	"	"	"	Cadmium	"	147	"	"	"

BIGELOW'S GRADATED BACK- GROUNDS.

NOTE FROM MR. BIGELOW.

EDITOR PHILA'DA PHOTOGRAPHER:

DEAR SIR: In reading your notice describing my revolving backgrounds, the impression was given that it was the same as Mr. Motes', *except* that it was painted in oil. Its chief advantage over any other is, however, in the *manner of shading*.

By glancing at the illustration of Mr. Motes' ground it will be seen that the darkest part is at the side, and the lightest at the other *extreme*, making the points of contrast too far apart to be practically useful.

By turning the ground of my construction so that a horizontal line would pass through the lightest and darkest portions of the ground, you get the *greatest contrast* (but not appearing *abrupt*, because the junction is concealed by the form of the sitter). Now revolve the ground still farther and the *contrasts lessen*, until one-fourth revolution, when the *contrast increases*. Thus making the *degree* of contrast optional with the operator, as the lighting of the sitter seems to demand.

It is this design upon which I base my claim for a patent; and not, as some suppose, upon the revolving principle.

I think no operator will be content without it after having become thoroughly acquainted with its usefulness.

Respectfully yours,

LYMAN G. BIGELOW.

OUR PICTURE.

It is difficult for one walking along the crowded wharves of our city to realize, that only a few years ago, a line of wood-covered banks extended where now endless piers project into the stream; and that the broad Delaware, now dotted all over with ships, sloops, and schooners, and made alive with swift-rushing steamers, saw only the occasional canoe of some painted savage dart

along, or lie on the placid bosom of the river, while its occupant was engaged in his silent fishing. Still harder is it to believe, while passing along the thronged thoroughfares of the city, or the thickly-peopled parts of its suburbs, that then the now tilled or built-up region was wild forest, traversed by the red deer, and prowling fox, and shaggy bear, with here and there a settler's log-house and limited clearing! Hence we regret the wholesale destruction of old landmarks and the demolition of ancient buildings which tell of former times, even though they give place to modern improvements, as we should regret to see the huge mass of the Coliseum at Rome removed and replaced, even if it were by a splendid first-class hotel or sounding factory. But photography steps in, and by its kindly aid, helps us to recall the past and preserve the records of bygone times.

Our print is one of the contributions made to this object. Our successful amateur photographer, Mr. John C. Browne, has, by his beautiful picture of the "Old Mill," near Germantown, given us a valuable record of the past. The wheel of the old mill no longer revolves. Its "departed power" leaves nought but ruin. The building itself no longer stands a landmark beside the little stream that washed its base; but this picture presents us with the reality which once existed, and enables us to travel back to bygone days. It was awarded our late landscape prize.

The following extracts from "Watson's Annals of Philadelphia" tell graphically the story of the original wildness of the region round about the locality.

"The first grist-mill set up in Philadelphia County was that now called Roberts' mill, in Church Lane, just one mile northeast from the market square. Roberts' mill was erected as early as 1683, by Richard Townsend, a public Friend, who brought the chief materials from England. Some years afterwards, in his printed address to Friends, he speaks of this mill and his early difficulties, and the kind providence extended to him there, which are very interesting. He states that his was the only mill for grain in all the parts, and was of great use to the inhabitants. That they brought

their grist on men's backs, save one man, who had a tame *bull* which performed the labor. But, by reason of his seclusion in the midst of the woods, he had but little chance of any supply of fresh meat, and was sometimes in great straits therefore. . . . In this location (he says) separated from any provision market, we found fresh meat very scarce, and on one occasion we were supplied by a very particular providence, to wit: 'As I was in my meadow, mowing grass, a young deer came and looked on me, while I continued mowing. Finding him to continue looking on, I laid down my scythe and went towards him, when he went off a little way; I returned again to the mowing, and the deer again to its observation. So that I *several times* left my work to go towards him, and he as often gently retreating. At last, when going towards him, and he not regarding his steps, whilst keeping his eye on me, he struck forcibly against the trunk of a tree, and stunned himself so much as to fall, when I sprang upon him and fettered his legs. From thence I carried him home to my house, a quarter of a mile, where he was killed, to the great benefit of my family.' "

And so the "Old Mill" went on, turning its wheel and whirling its stones as freely for one owner as for another, and year by year it found its out-looks enlarging and roads advancing towards it, or passing by it, and heavy wagons wending their way noisily where once the wild creatures of the wood had crept stealthily; and cultivated fields came close up to its walls and displaced the tangled underwood; and at last strange people came, with strange-looking instruments, and gazed upon the building, and poised and pointed their mysterious apparatus at its walls, and a poet might have heard the Old Mill sigh and say, "My time is come; they are measuring me for my coffin!" And the Old Mill was right in part of its meditations, for its time had come. But it erred in its afterthought; for these strange men were kind friends, who loved it, and would fain preserve a record of its form, when the reality of its fashion had faded from human vision. This kindly deed they have done; and now, though the Old Mill is gone, we can, with little effort

of fancy, set its wheel turning again, and hear the splash of its dripping buckets, and restore the scene once so pleasant to the eye of the passing tourist.

For the compilation of the above, we are indebted to Rev. H. J. Morton, D.D., who since childhood has been familiar with this Old Mill.

We append a little note from Mr. Browne respecting the taking of the picture:

"Wishing to spare your readers the needless infliction of reprinting my entire formula, which has already been published, I will refer to the *Philadelphia Photographer*, Vol. VI, page 60. During three years that have passed since that article was written, my experience has caused me to doubt the reliability of the citric acid and nitrate of silver solution, therein mentioned, for the purpose of strengthening the negative. *Vide Philada. Photographer*, Vol. V, p. 183.

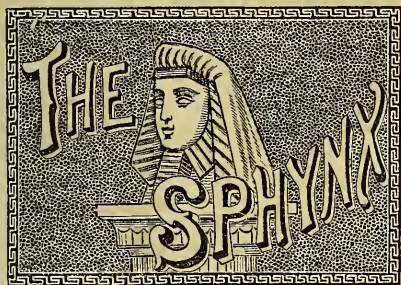
"Although I still use the developing solution there described for instantaneous views, I many years ago gave it up as a developer for landscape views, groups out of doors, and copying; using instead ammonio-sulphate of iron. *Vide Photographic Mosaics* for 1871, p. 16.

"The lens used in making this picture was a Dallmeyer rapid rectilinear, 11 inch focus, rack-work adjustments, $\frac{45}{100}$ inch stop; time of exposure, 30 seconds, May, 1870. The photographing of this subject was the first out-door work that I had occasion to make with this lens, having previously tried it once or twice only from my window upon a house opposite.

"I gladly yield to Mr. Dallmeyer a large portion of the credit bestowed upon my humble efforts."

Mr. Browne's greatest rival in the competition for the prize was Mr. C. A. Zimmerman, of St. Paul, Minnesota, whose picture of the *Dalles of St. Croix* is very charming, and will be presented to our readers, with further remarks on landscape photography in our next number.

Our prints were made by Mr. Wm. H. Rhoads, Philadelphia, Pa., on Hovey's unrivalled American albumen paper. We are also printing a portrait on this paper, and when it appears we shall have more to say about the paper.



Answers.

1. You will find several methods by referring to our back numbers.

2. Acetate of soda, 30 grains; chloride of gold, 1 grain; water, 1 ounce. When you wish to tone, add 9 ounces of water.—G. H. FENNEMORE.

3. Use a saturated solution of phosphate of soda, 5 ounces; water, 5 ounces; chloride of gold, 1 grain.—G. H. FENNEMORE.

4. Add dry bicarbonate of soda, and let stand several days, shaking occasionally, until it will no longer turn blue litmus paper red.—SPHYNX.

5. Neutralize carefully with ammoniacal alcohol made by adding $\frac{1}{4}$ ounce of concentrated ammonia to 1 ounce of 95 per cent. alcohol.—J. F. MAGEE.

6. See article on this subject, page 63, P. P. for 1870, also page 339, Vol. VI, 1869. We have never tried.—SPHYNX.

7. Place in the tank some lumps of well-

washed charcoal, and clean the tank out occasionally.—J. F. MAGEE.

8. Never had the curiosity to try. You do it and let us know.—SPHYNX.

9. Makes a metallic-looking film with better whites than ordinary developer.—G. H. FENNEMORE.

10. It takes the place of so much silver in giving density to the bath, and is of no practical advantage.—SPHYNX.

11. Albuminate of silver is not so easily fixed as chloride of silver, consequently, some are not carefully enough fixed, and hence the fading.—G. H. FENNEMORE.

12. Because your silver is decomposed in the paper, before or while printing, or the hypo bath is not fresh, or traces of silver may have got into the water after fixing the prints, or *vice versa*—SPHYNX.

13. What do you mean by iodides and bromides "oxydizing?" Explain, and I will try to answer you.—SPHYNX.

DEAR SPHYNX: The formula, for developer, for making babies' pictures, in February number of *Philadelphia Photographer*, should have read as follows: Soluble sul. iron and ammonia, from 15 to 40 grains to each ounce of water, and acetic acid No. 8, from one to two ounces per each 20 ounces developer, according to length of exposure of plate, &c.—ALSACE.

Several queries in type laid over for want of space.—SPHYNX.

Editor's Table.

IMPORTANT.—*The Solar Camera Patent*.—Just as we are going to press we received a telegram from Mr. Howson as follows: "The Board decide that Woodward is not entitled to either claim, but as there is merit in the invention and not time for a reissue, grant the extension." Our readers need not fear, however. Mr. Woodward must file a disclaimer, define his claim, or lose all. Full particulars in the *World* on the 15th.

THE PHOTOGRAPHIC WORLD for February, contains the following: Embellishment, "The

Giant's Causeway, by George Washington Wilson, Aberdeen, Scotland, and the following articles: Photography Abroad; The Uranium Intensifier; Bottle for Measuring Drops; Practical Hints; Want of Sharpness in the Negative; The Action of Light on Sulphur; Berlin Photographs; How to Pack Dry Plates; How to Avoid Stains; Mr. Bull's Method of Advertising; Reproduction of Negatives; How to Separate Chloride of Gold from Acetate of Soda; Photographs for War Despatches; Astronomical Photography in the United States, by Dr. Vogel; On Lenses, Diaphragms, and Focussing; Notes

In and Out of the Studio, by G. Wharton Simpson, A.M., F.S.A.; Splashes of Silver, by Old Argentum; How to Narrow a Dipper; Photography for Boys; Curtis's Method of Mounting Prints, by C. L. Curtis; Short Photographic Sermons, by Geo. W. Wallace; A Few "Dodges," by R. Benecke; New Photographic Process, by Wm. Win, A.M.; Our Reception; The Next Exhibition; Position and Composition; The Solar Eclipse, by C. A. Young; The Magic Lantern, by Prof. Henry Morton, Ph. D.; Proceedings of the Hypo Club; Opaque; Our Picture; On Glass Transparencies, by Arthur Coventry; All the World Over; The Defeat of the Sliding Box Patent; Table Talk; Editor's Table.

THE SCOVILL AND HOLMES MEDALS.—Parties who desire to compete for these medals (see proceedings of the National Photographic Association at Cleveland) are requested to send in their names, and a statement of their "improvements," &c., to the Secretary, by April 15th, in order to give the judges ample opportunity of testing their claims, and to make up their report.

EDWARD L. WILSON,
Secretary.

MR. J. P. GREENWALD, photographer. Adrian, Mich., died of consumption, last month. He was buried Feb. 12th. Eight years ago, we worked together under the same skylight.

It is probable that our esteemed correspondent and friend, Mr. G. Wharton Simpson, will be present during the June Exhibition. This is glad news, and he will receive a hearty welcome. Others of our foreign friends in photography, write of their intention to be here also.

Our picture next month will be from the competing negatives of Mr. Chas. A. Zimmerman, St. Paul, Minn., and will be accompanied by some excellent papers on landscape photography.

MR. JAMES L. FORBES, for many years at Gurney's gallery, is now with Mr. Wm. Kurtz, 872 Broadway, N. Y., side by side with Mr. Elbert Anderson, the "fog man." They are successful, so we wish them a continuance.

SOME of the most excellent work in all technical respects that we have recently seen, is from Mr. C. W. Stiff, of the Jones Gallery, Salem, Mass., a variety of whose carte and Victoria photographs are before us—old gentlemen, young ladies, little tiny misses, all treated in the same excellent manner. It is refreshing to see such work.

"THE HUNTER'S MISHAP," is the title of an excellent *genre* picture, from Mr. E. M. Van Aken. Lowville, N. Y. Did you ever go hunting, shoot a deer, shoulder him, and as you dodged with delighted heart towards camp, through the snow-fringed undergrowth, catch one snow shoe on a hidden log, and—*fall*, with the deer, and the gun, and the snow-shoes, all conspiring to pin you fast, face down? If you did, then Mr. Van Aken has pictured you perfectly in his spirited picture.

MR. R. GOEBEL, St. Charles, Mo., has favored us with an admirable cabinet picture of his four children, and another representing a pair of cornucopias inverted, from which are falling about 90 cartes of the officers and men who erected the famous St. Charles bridge. It is unique in design and finely executed.

THE GERMAN PHOTOGRAPHIC SOCIETY, in New York, celebrate their third anniversary at their rooms, No. 28 Stanton Street, N. Y., on March 6th, by a social reunion. We wish them great pleasure.

RECEIVED.—MR. W. G. Chamberlain's Catalogue of Colorado Scenery; some interesting Texas views, from Mr. H. A. Dirr; some admirable cartes, from Lockwood & Ely; these gents get \$4.00 a dozen, their neighbors, \$1.50; they do the best work, and the best business, *of course*; some well-posed and well-lighted pictures, from Mr. Ormsby, Stockton, Cal.; an excellent carte of Queen Emma, of the Sandwich Islands, by Mr. J. W. King, of Honolulu; one of his advertising sheets, from Mr. H. W. Boozer, Grand Rapids, Mich.; from Mr. G. W. Doty, Wooster, Ohio, a pamphlet giving instructions to customers.

ANSWERS TO CORRESPONDENTS.

BROWN & HIGGINS, Wheeling.—The patent of Park & Van Pelt is merely for the use of hyposulphite of soda with bicarbonate as a "dirt lifter" for soiled fabrics, and it is a ridiculous piece of presumption on their part to say that you "infringe their patent when you use hypo in photography." The idea! Full particulars in our next.

2.—We do not know anything about the negative process of Richardson & Co., and unless you *know* it is good, it is *safest* not to buy it.

YOUNG CHLORIDE.—Your "Drops of Gold" and other valued communications are crowded out.



ST. PAUL, MINN.

Boston Public Library.
 Competing Prize Picture.

DALLIES OF THE ST. CROIX.

G. T. ZIMMERMAN,

T H E

Philadelphia Photographer.

Vol. VIII.

APRIL, 1871.

No. 88.

Entered according to Act of Congress, in the year 1871,
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THE EXHIBITION.

THE Third Annual Exhibition of the National Photographic Association of the United States will be held in Philadelphia, Pa., beginning Tuesday, June 6th, A.D. 1871, in Horticultural Hall.

A cordial invitation is given to foreign and American artists to exhibit their work.

No duties are charged on foreign pictures, and the freight arrangements will be low, so that the expenses to exhibitors will be small.

Pictures may be framed or unframed, at the option of the exhibitors.

After the Exhibition there will be a sale of such foreign works as the Committee of Arrangements may be empowered to sell, and such sale will be conducted for foreign exhibitors without commission.

Further particulars will be communicated to applicants by the Permanent Secretary.

Arrangements and rules of the Executive Committee, for home exhibitors, will be given next month.

Arrangements with railroad and express companies, which will reduce the costs to those intending to be present or to exhibit, will also be announced in good time.

The railroad companies are responding very liberally, and good terms are expected from all directions.

There are fine hotels close to the hall, and reduced rates will be secured.

Prof. Morton will deliver two of his admirable lectures on *Light*, during the week. A grand Stereopticon and Lantern Exhibition will be given, and also a public reception at the American Academy of Music. These, with the grand Exhibition and meetings of the Association, will make the occasion both delightful and profitable.

Begin to prepare now, in the United States and in Canada, and *all come*.

WM. H. RHOADS,
Local Secretary,
1800 Frankford Avenue.

EDWARD L. WILSON,
Permanent Secretary,
Office Philadelphia Photographer.

Dr. Vogel's Handbook of the Practice and the Art of Photography.

By the time this meets your eye Dr. Vogel's book will be ready, and as we have read it *all*, in manuscript and in proof, we can assure our readers that it is an eminently fresh, practical, and valuable book. As its title indicates, it goes over the whole ground of photographic *practice*—*i. e.*, the manipulations and the articles we manipulate with, and treats very extensively upon the *artistic* department of photography;

i. e., that part which enables us to secure *pictorial effect* in the work we produce.

That Dr. Vogel is fully competent to instruct in these departments our readers are well aware, and his continual intercourse with practical men enables him to write with a vigor and a vim which will be appreciated.

We reserve a complete review of his work until our next. It will be bound in cloth, handsomely illustrated with fine wood-cuts, photographs, &c., and printed on fine white paper. Price, \$3.50, post-paid. Pending its issue we extract, as an example of the style of the work, Dr. Vogel's remarks on the

"CARE OF THE COLLODION."

Collodion forms the basis of the photographic negative picture; it is for the photographer of more importance than the paper for the draughtsman. It not only acts mechanically by fixing the sensitive film to the glass, but also chemically by containing besides the indifferent pyroxyline a whole line of products of disintegration, which have a material influence on the chemical and physical properties of the film.

The care of the collodion is consequently of much importance for the photographer who desires to secure equal results always.

The changes which iodized collodions suffer manifest themselves by a change of color, first yellow and then red, and by a decrease of sensitiveness. In these changes free iodine, which remains dissolved in the collodion, separates from the liquid and gives rise to the formation of free nitric acid in the bath, which will impair the sensitiveness of the plate.

The salts of cadmium have the least tendency to turning the collodion red, while the salts of ammonium have the greatest. While the collodion turns red, it becomes more fluid, and finally so limpid that it does not secure a homogeneous or tenacious film.

It has been recommended to shake collodion which has turned red, with carbonate of soda, respectively with metallic cadmium, and to let it settle. These bodies will absorb the iodine and restore the bright color of the collodion, but at the same time the plates will have a tendency to foggingness,

probably in consequence of the formation of alkaline salts, which are partially soluble in collodion.

It is much more preferable to mix the red collodion with cadmium collodion. The latter will remain white for months. It is somewhat thick, and by mixing it with red collodion we will get the desired consistency and color very often.

Any one who works with cadmium collodion exclusively will very seldom or never complain about red collodion. For other mixtures, which have a tendency to turning red, it is recommended to preserve the plain collodion and the iodizer separately.

In this case the fluids are mixed in such quantities as experience has taught will be consumed in a short space of time.

Besides the disengagement of iodine a change in the proportion of alcohol and ether takes place, as well as the introduction of impurities, such as dust, &c.

The excess of collodion which has been poured on the plate is generally returned to the bottle. But this excess has lost a part of its dissolving media by evaporation, and of course more of the fugitive ether than of the less fugitive alcohol.

Hence, what is poured back into the bottle is thicker and richer in alcohol. With very careful management this does not matter much; under favorable circumstances a bottle of collodion can be used all but a very small remnant. And if this remnant should be too thick, it should be diluted with $\frac{1}{4}$ or $\frac{1}{2}$ of a mixture of 3 parts of alcohol to 5 parts of ether.

But much more annoying than this loss of fluidity is the accumulation of dust and other impurities. Small traces of dust are washed into the collodion bottle with the excess which is returned from the plate; with every plate this quantity is increased, and finally the collodion will work uneven.

This is more frequently the case when travelling, where we have to contend more with dust than at home; the annoyance is increased also with larger plates.

The rough corners of the plates exercise a very injurious influence, as they form receptacles for dust and other impurities, which are only too easily overlooked and returned to the collodion. It happens quite

frequently that the grooves of the plate-boxes are filled with impurities, all of which help to spoil the collodion.

All these evils can be avoided by returning the excess of collodion to a separate bottle. This collodion is by no means useless; it should be left to settle for a week or so, and the pure liquid can then be decanted and used.

That the neck of the collodion bottle should always be kept clean is a matter of course. A bell-glass should be placed over the stock-bottle. When no special collodion bottle is employed, the neck of the bottle should be kept perfectly clean by wiping it with the finger, and the first few drops should be thrown away before pouring the collodion on the plate.

The bottle should be corked immediately after the plate has been collodionized."

UP MOUNT WASHINGTON.

SINCE our last issue we have had a very pleasant jaunt of twelve days among the White Mountains, and over the frozen roads of Canada.

It is a common mistake, on the part of the travelling public, to suppose that spring, summer, and autumn are the only seasons to see Nature. Winter, beautiful winter, must be included.

We arrived in Littleton, New Hampshire, Tuesday, February 28th, at 5 o'clock P. M. Our good friend, the indomitable landscape photographer, Mr. B. W. Kilburn, was in waiting for us, the sleigh all packed with camera, tripod, buffalo robes, fur coats, and lunch kettle, and, in less than an hour for supper and change of clothing, our fleet little horse was carrying us over the frozen thoroughfare at the rate of ten miles an hour. It was a beautiful moonlight night. The air was snapping, and the great trees and the ghastly rocks were clothed in frost-quills almost as painful to the touch as those of the "fearful porcupine." Away we flew along the borders of the ice-bound Ammonoosuck, like Tam O'Shanter on a certain memorable occasion, almost crazed with the intense beauty of the night. In two and a half hours we arrived at the White Mountain House, seven miles from the railroad

depot at the foot of Mount Washington, where we stayed all night. Wednesday morning, at nine, we were mounted on an old log sled, which we had hired with two horses and a driver, to carry us, if possible, over the unbroken snow to the foot of Mount Washington, for, notwithstanding the terrible time our good friends Clough and Kimball had in making the ascent, it was our purpose and desire to see the summit of that glorious White Mountain before night. The poor horses had a hard time of it. A recent thaw made the crust on the snow too soft to bear them, and they floundered about and labored hard, so that we were glad to relieve them part of the way by walking. Oh! what a charm was there in walking through that wild wilderness of snow-clad trees, with scarce a sound to break the stillness!

It took us just three hours to make the seven miles, and just at noon we reached the log cabin at the foot of the mountain, which is occupied by six sturdy wood-choppers, whom we found at dinner. Although we had a lunch-kettle full of provender, it would be a novelty to eat a wood-chopper's dinner, so we accepted the invitation and partook of a hearty meal of fat, cold pork, molasses, bread, tea, and gingerbread. It began then to snow and we couldn't see half a mile up the mountain, but we saw away ahead hordes of inquiries for "my last number of the Journal" sure to come, if our issue should be detained; so we urged our friend to *try* to make the ascent even if we were forced back. He assented, and strapping our traps, our overcoats, and our lunch to our shoulders we donned our cow-hide boots and started off, Alpine stock in hand. The snow was falling thick and fast then, and as we arose the wind seemed to grow stronger, first coquetting with our hair and whiskers, then tickling our ears, and finally in real earnest, creeping down our necks and forcing us to button up closer. Grim visions of friend Clough's paper in our last number came up before us, and we began to feel chilly. However, we walked at a slow pace, or rather *climbed* leisurely "onward and upward," and soon the perspiration began to start—the chill left us, the novelty of our situation led us on ahead and

dispelled all the grim visions. On, on, on we went, through the blinding snow, until we passed a little sign-board by the side of the railway track on which was written "1 mile." The snow clouds were so thick that we could not see fifty yards ahead, so we were deprived of many beautiful sights going up,—but we were not suffering from the cold, and on we went. Through the great forests full of snow grottoes and palaces tantalizing our photographic desires; beyond the stunted trees; over the tangled rock-pines; among the frost-clad rocks; close to the edges of great yawning gulfs which we could not see; now straight ahead, then off to the right, up, *up*, *up*, and the second mile was reached. As we neared the Lizzie Bourne Monument the storm became furious, and it was impossible for us to stand alone, so we locked arms and thus finished the ascent, reaching the depot building, where Professor Huntington's party are quartered, in exactly two and a half hours from the time we left the log cabin. Soon after we arrived, Sergeant Smith measured the velocity of the wind, and it was blowing at the rate of 79.6 miles an hour. It was not intensely cold, however, and except for the last fifteen minutes of the climb we did not really suffer as much inconvenience as in making the ascent in summer. After our arrival on the summit we did not feel as fatigued as we often do after a day's work, answering correspondents in trouble with their paper, or bath, or telling them how to build skylights and run out their cheap competitors. A certain solemn feeling of relief *did* come over us though when we thought that *no letters could reach us there!*

Of course, as the storm was raging, we could not take a moonlight stroll across the summit nor snow-ball the owls sitting on the Tip Top house, so we cleaned off the icicles from our faces, and proceeded to find out whose guests we were. We soon began to thaw out and found that only two of the scientific party were at present sojourning there—Sergeant Theodore Smith, U. S. A., and Mr. S. A. Nelson. Sergeant Smith belongs to the U. S. Signal Service and is an accomplished meteorologist. He also manages the telegraphic apparatus,

which enables him to communicate with the "lower regions" at any time. He is a talented young officer, and we hope he will be rewarded for immuring himself in that cold place by distinguished promotion in the army soon. Mr. Nelson is also an experienced meteorologist, and "runs" the culinary department. We can testify to his accomplishments as a cook, having partaken of the results of his labors in that line both to our comfort and discomfort. These two men live up there pretty much as one does on shipboard and seem quite cheerful. Were it not for the chere click of the telegraphic apparatus, however, they say it would sometimes be dismal enough. They always welcome visitors as it is.

As we have said the wind was blowing nearly eighty miles an hour when we arrived and the snow was blinding. The building creaked and shook, and the noise outside was like the grinding of grim machinery. We passed a pleasant evening, and had a good night's rest in the bunk provided for us. We were awake next morning at 5.30, soon dressed, and to our great delight found the clouds were breaking. It was then and there our privilege to see the grandest and most indescribable sunrise that man was ever privileged to see. Although it was clear above us the clouds below were still busily floating around like great armies preparing to break camp. Some sailing in one direction, some in another. Away off towards the sun there were some great snow-clouds shifting about as if not knowing where to turn. Suddenly their great heads would become illuminated with the most brilliant red and golden light. The next instant they would be torn asunder like the parting of a lace curtain, and the sun would scatter his crimson light all over them. Some parts of the clouds would then arise, like the spray at Niagara, carrying the gorgeous colors with them; others would descend, on which we saw the most beautiful rainbows and the sun half risen only would for a moment shine unobstructed. Again a thick cloud would cover the sun and the same operation would be repeated. This was done several times at short intervals, the sun battling with the clouds for the mastery, and mowing them.

down as a line of musketry mows down humanity. After the struggle was over, the clouds gradually scattered and then arose again, leaving the valley below us all clear to the sea. The ocean could be seen with the naked eye, and with a telescope the ships entering Portland harbor and the people cleaning the snow from their pavements in Gorham, could plainly be discerned. Oh! if you would get an idea of the magnitude of creation and of the wonderful works of God, climb up a high mountain and take in what you behold. Our time was limited, so we had to take in pretty rapidly. Mr. Kilburn exposed some thirteen negatives during our stay, and he and Messrs. Clough & Kimball can, therefore, give you better ideas of what we saw than this poor pen of ours. The snow had nearly all blown off the mountain top, thus giving us the best possible opportunity of seeing the beautiful frost formations that attach themselves to every rock, house, telegraph pole, and so on, on the summit. One never tires examining them. They are shaped like the wings and tails of birds, and are of the purest white. They vary in size. Their extreme end points horizontally to the surface to which they are attached in the direction of the wind. They are neither snow or ice, but masses of frost, as pure as alabaster and as beautiful as the wings of angels, for they must be like them. Over and around the summit we travelled, time and again, now opposed by the cutting wind (which had fallen to forty-four miles) then pushed forward by it, taking in what we could of the wonders about and below us. We climbed up a snow drift to the top of the Summit House and sat astride the ridge pole, a feat not done daily. The great gulfs, long miles below us, looked to be within snow-ball distance, and hundreds of unnamed mountains slept in their white quiltings beneath us. The clouds began to gather over us threatening a storm, and as all the plates we carried up had been exposed, we prepared to make the descent.

The room in which our hosts live is in one corner of the depot building, well protected, and is about eleven feet wide by twenty feet long and eight feet high, and serves as kitchen, parlor, sleeping apartment, and ob-

servatory. Two small windows light it, and when they don't, coal oil does. Two stoves are required to heat it when it is very cold and sometimes only one is used. Our regret was that we could not stay longer, but we have explained the reason. Our *World* for March 15th needed us, so we bade farewell to our kind hosts, and were soon down the mountain side and out of their sight. The descent was more pleasant than the ascent, for there was no storm and we had a clear view. It was more perilous though, and constant watching was necessary lest we fall, or sink in the snow. We arrived at the base one and a half hours after starting. Took tea again with the wood choppers, and then walked back to the White Mountain House on snow shoes, accomplishing the trip in half an hour less than the horses did for us coming up. We drove at once to Littleton, and next morning at nine o'clock were on our way to Canada.

Of what we saw in Montreal, Toronto, and so on, we must tell in our next, for space will not now permit.

ON SOME CAUSES OF FAILURE IN PORCELAIN PRINTING.

BY EDWARD BOETTCHER.

UNDER the above heading Mr. David Duncan furnishes a very good article indeed for the February number of the *Photographer*; but I would like to point out where he is a little inconsistent, leaving thereby, in fact, the cause of most failures unexplained.

Mr. Duncan says: "It must be understood that a certain quantity of nitrate of silver is required, and no more." Perfectly right; but then he recommends the same quantity of silver (40 grains) for 8 grains of chloride of either strontium, calcium, or lithium. Now that is radically wrong. The great object in making porcelain colodion that will work well is to change all the chlorine from the chlorides of strontium, calcium, or lithium into chloride of silver by the well-known chemical process of double predestination. But as the chemical equivalents of the three named metals are widely different, it follows that each requires a different quantity of nitrate of

silver to exchange all their chlorine for the nitric acid of the silver. Taking 10 grains of chloride of any of the above metals as a standard quantity, it follows that the lighter the chemical equivalent of the metal, the more chlorine it will contain in proportion to the others; the heavier, the less. From that it follows, that the lighter metals require the most nitrate of silver, the heavier the least.

A calculation from their respective chemical equivalents gives the following result:

		Nitrate of Silver.	
10 grs.	Chloride of Lithium	requires	67.45 grs.
"	"	Magnesium	" 54.16 "
"	"	Calcium	" 43.05 "
"	"	Strontium	" 26.63 "

I would not advise, however, to take just 10 grains of all the chlorides, because with the first two the collodion would print too heavy, with the other two too thin. Taking 6 grains of the chloride of lithium, 8 grains of the magnesium, 10 grains of the calcium, 15 grains of the strontium, and the nitrate of silver in proportion to the above figures, it would give the following receipts for a quantity of 8 grains of collodion:

		Nitrate of Silver.	
6 grs.	Chloride of Lithium	requires	40.47 grs.
8 "	"	Magnesium	" 43.33 "
10 "	"	Calcium	" 43.05 "
15 "	"	Strontium	" 39.94 "

Citric acid the same quantity as the chlorides. No fuming required.

I, for my part, prefer the magnesium. Collodion made with it after the above formula gives very vigorous clear prints and beautiful tones.

Art Writings for Photographers.

EVERY year the literature of photography becomes more important, and like all mental progression, is ever from the concrete to the abstract. At first the processes and formulæ, then the methods, now the picturesque and ideal, all that can by photography be reached of that subtle realm, those evasive ideas that are summed up in the much-abused and little-understood word, Art. The tendency of our literature

certainly is an outcrop of our felt necessities. We, the profession, are outgrowing, have indeed outgrown, the notion, that fine results are produced mechanically or chemically. The chemical equations and reactions remain, but with their constancy are always mixed, variable elements, to master which we must put forth all our powers. This by no means implies the neglect of methods and formula. Every beginner must pass through that stage. There is daily ocular evidence, that operators of twenty years' standing have not got beyond it; but it is recognized as a means, no longer as the end; and to the true end, hundreds of American photographers are reaching, more or less blindly and ignorantly, but grasping with their whole strength at all means of information, struggling with all their might toward every ray of light. Models are bought with avidity, and every article that can elucidate the lighting, posing, or general harmony of a picture, eagerly read. Just here, however, a difficulty or difficulties arise. Many writers that begin with a fine title and smooth phrases, remind us of an engineer who starts his train with a toot, rattles over the level track with much racket, but, reaching an up grade, can't make the driving-wheels hold; round they go furiously, but it is all a waste of high pressure gas, the wheels slip, the train sticks. So these gentlemen promise much, and will even admit us to Art's inner sanctum; there are many fine words; still the advice is confusing, the sentences vague, aimless, pointed with generalities that glitter. At the end, we are conscious that we have been led—nowhere. "Study nature," is their grand shout. Very sensible advice, doubtless, but how I have ached to have it explained, what kind of nature, when, and how to be studied; just what to hold, just what to lose.

Apart from these, other writers, earnest, capable men, often fail to produce much effect. They are read with a certain amount of understanding, but do not produce in us the correct feeling necessary to apply their precepts in practice, and those things that fully meet our apprehension, we discover to have been already taught to us by our own

experience. It is confessed on all sides, the great difficulty, amounting almost to an impossibility, of verbally teaching art, or communicating artistic ideas. Mournfully, Ruskin laments the failure of his writings to fulfil this intention. A life's labor lost, he as much as says. Similar is the disgust of artists over a non-appreciative public, and, it may be said, at each other. To explain the reason of this difficulty, is to pronounce it almost insuperable.

The eye sees not beyond the mind, and will convey to the latter no image or idea which the understanding and the heart are not already prepared to receive. So in the realm of sound, the capacity of the ear to perform the simple act of hearing is curiously contrasted with the action of the mind, as recipient of musically expressed ideas or feelings. Three persons listening to a Beethoven symphony—one has no ear for music, cannot distinguish Old Hundred from Yankee Doodle, hears only a noise, and is not apt to think it a pretty one. A second individual has an ear as acute as the others is dull; he can tune, can sing, can tell by name the keys into which the orchestra modulates, but listens indifferently; would prefer the Anvil Chorus to the Andante of the 5th. With an organization sensitive to tones as distinguished from each other by pitch, he has not mind and soul for the sublime strains. Tones affect him physically. A third person with little or no musical proficiency, with a moderate ear, but a deep, tender heart, rises on the wave of the master's passion, sinks with him into the yearning depths, takes to his soul the tender melody, and is refreshed in his whole humanity, where the others are stunned or bored. Analogically, this illustrates the sister art. Each can perceive only what he is capable of perceiving. Eyes see the same forms, ears listen to the same sounds, but very differently are the owners of different ears and eyes affected.

It is the same difficulty we experience every day with our customers; we think them guided only by whim, caprice, when in fact we see something different in the picture from what they can see; in vain we explain, try to point out this or that; very

rarely a little headway is gained, and they confess to seeing something not before noticed. So it is with us; our teachers speaking from a higher standpoint, talk to duller eyes and weaker hearts. But not altogether in vain is any true message delivered. The teachable spirit will distinguish between the voice of wisdom and vain bombast, and will pry earnestly into the meaning of the former; will believe that there remain greater heights as yet unreached, and from these more glorious visions. To these we toil on, listening to every voice, subjecting our work to the most rigid scrutiny, attending to every means of improvement.

Among the works devoted to the æsthetics of photography, there are, so far, none that compare for a moment with that by Mr. H. P. Robinson. He has made quite a successful effort to show why one picture is better than another, and tells how to go to work and put together, and build up a composition. Considering the need for such information, and the time this book has been accessible to the American photographer, it is almost astonishing that it is not more generally found in our gallery libraries, or at least it would be singular if it were not, for the difficulty alluded to above, that the artistically ignorant feel in comprehending a treatise on art. But if such could be persuaded how clearly and simply Mr. Robinson explains, in "Pictorial Effect in Photography," and how very fundamental he is, beginning at the first steps, or as one might say, beginning with creeping, and carefully advancing up to the precise explanation of the principles of grand composition, but few photographers would feel that they could afford to be without his book. It is quite true that the public (our customers) care but little for composition, and that the photographer whose sole aim is business can as yet fill his pockets from the proceeds of tintypes; but the ambitious photographer, who is striving to make all his work pleasing and tasteful, will, by the effort to master more complicated forms, better succeed in even the simplest kind of portrait.

While for the present the "Pictorial Effect in Photography" stands alone as the only worthy treatise on this subject, in the

English language at least, we may confidently expect that, keeping pace with the progression of the art, other books will appear elucidating points and containing applications, which his proposed limits would not allow Mr. Robinson.

How to Make a good Solar Negative.

BY W. L. SHOEMAKER,

(Solar Printer, with Albert Moore, No. 828 Wood St., Philadelphia.)

SINCE my article in the *Mosaics* on Solar Negatives, I have received many letters asking for further instruction, and a more extended criticism of the faults and causes thereof; as it would consume too much time to give personal answers, I ask to give such through the medium of your valuable Journal.

I find the majority of operators do not take the proper time to get good solar negatives, and when they send their efforts in that line to us for printing they accompany them by such apologies as the following, apparently thus expecting to relieve themselves of all responsibility: "This was taken late in the day." "A little overtired, but guess you can fix that all right." "My developer streaked this; vignette it out if you can"—poor excuse. "Light was bad; had a good deal of trouble with this sitter." "Had no collodion ready"—no excuse at all. "My bath was awful bad." "Did not know this was to be a solar negative"—reasonable. "This is a little thick, but do the best you can." The latter negative was overtired, and, not having sufficient contrast, the operator intensified with sulphuret of potassium, thereby totally spoiling it for solar purposes. Here is the one generally used, and is bad because too often repeated, "I will do better next time."

My advice is to try *now*. Let your *mind* fully understand what your *hands* are doing; try and interest yourselves in your business so as to improve every branch of the manipulations; do not try every receipt given you, but select one you have seen well worked, and do not give up until you have *equalled* your neighbor's work, then let your ambition be to *excel* it.

Such being the weak excuses used to

cover the carelessness of operators, is it a wonder that many make no effort to establish a good trade in enlarged work? Those making the effort invariably succeed, and it not only adds to the income of the establishment, but gives a reputation such as only they who make life-size heads attain. Moreover, it secures additional trade in the smaller sizes.

As it requires but little additional expense, and that only in adding a few specimens of large sizes, to obtain this kind of trade, why not make the trial?

As to the chemical manipulation necessary to produce good negatives for solar purposes, a very trifling outlay of time and patience, with the hints I shall give, ought to suffice.

Let us commence with the sitting. Let the light be so managed as to give full shadows, round up with proper side-light and screen.

The finer details in the shadows are much more effective in an enlarged print, than in a contact print, therefore do not place the side-screen too close to the face. The majority of negatives are spoiled by the side-screen being placed so as to throw a false light over half the eye, thus destroying not only that feature, but many of the fine lines, and causing flatness to the negative. Observe that the high lights are not dense, but full of detail. All of this can be secured by fully understanding your light. The great fault is in using *too much* light, not having what is used come in at the proper angle.

Never use a dark ground for a solar negative for printing vignette heads. Either use a white ground at a distance from the subject, or a medium tint closer. Mr. Bigelow's new revolving ground is about correct in tint.

Never use a small tube expecting to get good sharp results. Use the 4-4 whenever practicable—a waste of time in exposure, but a great gain in quality.

Use your camera as near level as possible. The greatest fault in this direction is in using the camera at too great an angle, thereby distorting some features, and foreshortening others. The best illustration of this error was that displayed by Dr. Vogel.

at the last Exhibition, and should be well studied.

By using a large tube at the proper distance from the subject the angles are shortened, and nature is more nearly approached. When possible, use a large plate for the negative, and select a glass as free as possible and clear of all imperfections. Some of the negatives we receive have the appearance of being selected as unfit for anything else, and, as some have said, "It is good enough; it is to be colored." They are too nearsighted to observe that the time lost by the artist in retouching spots and bubbles, is so much work taken from the face. Do not use albumen on the plate unless very thin, as it is liable to contract under the intense heat of a condensing lens, thus splitting the collodion. If used thin, no harm will result.

Make the head on the negative at least one inch for bust or vignette pictures. A little larger is better; the larger the head on the plate, the less the intensity. Many make a half inch head and expect a fine solar full life-size. We can do it, but at a great loss of time and of quality.

Make all standing figures, whenever practicable, on 4-4 plates. Make the figures of such a size as to take in all of the background, as a great difference of proportion is necessary in an enlarged print, and requires more background than cards or cabinets.

For solar negatives of children, or views from animal life, small negatives and smaller instruments may be used to an advantage, as they require shorter exposure. The most desirable size for solar negatives from life is two on a 4-4 plate. I would prefer views taken on 4-4 or 8-10 plates, as they can be made much cleaner, and allow us to use a wider angled tube for enlarging, thereby securing straighter lines. I would recommend the trial of the developer used by Mr. John C. Browne and fully described in the 1871 *Mosaics*. Mr. Browne's negatives are the cleanest I ever saw, and perfect for solar purposes, which perfectness is mainly due to the care in developing. Any bath in good order should make a good solar negative. The collodion used should never be quite as thick as for contact nega-

tives. Cadmium collodion gives a bluish negative, and very rarely makes as fine a negative for solar purposes as ammonium and potassium collodion, which gives a creamy tint to the negative.

As I have been repeatedly asked what I consider a good collodion for solar purposes, I give the following formula—one used by a very successful photographer. It is not given with the idea of being the only good one, but to answer the inquiries.

Ether and Alcohol,	. . .	equal parts.
Iodide of Ammonium (light yellow),	. . .	5 grains.
Bromide of Potassium,	. . .	2 "
Bromide of Cadmium,	. . .	$\frac{1}{2}$ "

Mixed in the following manner: In one bottle place 14 oz. alcohol, 4 oz. ether; to this add cotton for 32 oz—about 4 grains to the ounce (prefer Anthony's blue label); dissolve the bromide of potassium in very little water, to this add 2 oz. of alcohol, mix thoroughly with a rod; to this add the iodide of ammonium and bromide of cadmium. After dissolving, add 12 ozs. of ether, which, when stirred, will throw down a heavy precipitate, and should leave the solution perfectly clear. If not, add alcohol drop by drop until clear, without stirring. Have another bottle ready with an ordinary filter; if an oily deposit is seen below the precipitate it should not be added to the filter; now add the filtered solution to the other bottle. After filtering or settling, it is ready for use. With this collodion I have seen many fine negatives produced.

Whenever we receive a negative full of pin-holes we ask, what kind of iodide of ammonium is used? The answer invariably is "dark red." I have always recommended the use of light iodides for avoiding this very difficulty, and firmly believe that most of the trouble of the dark-room is from the use of dark iodides.

This collodion keeps well. If it works rather weak, add a few grains of iodide of ammonium to the amount in the coating bottle, which will readily increase the intensity. A very good plan is to have a bottle of plain collodion always on hand, made very thick, say double thick; also a bottle of iodized ether and alcohol doubly

iodized. If the collodion you are working is too intense, pour off a portion of the iodized solution, add the plain collodion until of the proper thickness, and you are ready in a few moments with a new collodion. Never dilute collodion except with ether. Some cotton is made glutinous and lumpy by having alcohol added to the collodion. This mixture can be added to the regular coating bottle at the end of the day's work, thereby benefiting it.

It is the duty of any operator who has ambition, to always be ready with materials in proper order, so as not to throw the blame of a failure on the sitter.

This collodion works quickest when fresh; care should be taken not to overtime, as overtiming flattens the image and weakens the contrast.

As the developer may make or destroy, use your judgment as to the proper strength. For solar work use the developer about 2 ounces of protosulphate of iron to the quart; $1\frac{1}{2}$ to 2 ounces of acetic acid, and not less than $\frac{1}{4}$ ounce of alcohol. The developer may be used even weaker than this with fine results. A solar negative should never be redeveloped. If too weak leave it alone. A weak negative is much easier managed in a solar camera than a strong one. Always, when a negative is not satisfactory, make another if you can. As it is the most profitable negative made, care should be given it to make it well. Stop developing when all the detail in the face is developed. Pay no attention to the drapery. If properly timed, the drapery will be strong enough. Fix in cyanide of potassium, used weak; wash very well, as the majority of negatives we have on hand unvarnished, although protected by tight closets, are changing, and in some can be seen signs of crystallization. That splits the whole film, but does not occur until the negative has stood some three years.

We do not object to varnished negatives, if *properly* varnished—that is, with a soft varnish such as sandarac with oil of lavender and chloroform. This I consider the best varnish, if used thin. Thick varnish becomes rough by partially softening when printing in a solar camera. A hard varnish becomes brittle under a condensing lens,

and frequently cracks from the plate. Varnish having Venice turpentine in its composition is subject to this more than any other. Never add gum arabic or albumen to the surface of a solar negative, as it sometimes roughens the surface. In some cases a little reduction in the negative benefits the print. When so coated it is impossible to reduce a negative clean.

"*Overtime and under develop*," says Old Foggy, but such a result is flat and never round. Learn to time correctly, and until full detail is obtained. Further timing only injures.

To Pack Negatives Safely.—Face the negative to another glass of the same size, paste small pieces of card on the corners, wrap well in newspaper, and *without tying with a string*, inclose either in a box or between strips of back-board.

A great many negatives we receive are broken by tying before putting on the outside wrapper or box, thereby making an uneven pressure.

Where negatives are to be mailed, try and get them stamped gently while you are present, as it seems to be the particular pleasure of Uncle Sam's postmasters to break anything containing glass.

It is the intention of Mr. Albert Moore to exhibit some solar negatives at the next Exhibition, showing samples of the various defects and perfections of light and manipulations, which no doubt will be instructive to a great many.

To the many whose questions I have here tried to answer I can give no better advice than the following:

"*Never be ashamed not to know, but be ashamed not to learn.*"

"*Never pretend to know; as for pretending to be ignorant, there is danger in that, since all men are ignorant.*"

Even in asking questions concerning the subjects I have most carefully studied, I may truly say I desire to learn. And "as every man knows something I do not know," let others follow up this subject until we all fully understand.

SECURE Dr. Vogel's new book.

PHOTOGRAPHIC DIALOGUES.

(SEQUEL TO "ONE HUNDRED DAYS IN A FOG.")

BY ELBERT ANDERSON,

Operator Kurtz's Gallery, 872 Broadway, N. Y.

A. HAVING now all our chemicals in order, it were well we inspected our camera. Mr. Carey Lea says: "Any camera that is not thoroughly good, is absolutely worthless." I say amen to that. And our mutual friend, Edward L. Wilson, says: "In choosing your apparatus, you are told to 'get the best,' otherwise your apparatus will inevitably 'get the best' of you." My camera is from the American Optical Company, it is certainly the best I have ever used; though I have taken the liberty of making several important alterations which, for my use, are a decided improvement. The swingback, especially, is vastly improved by placing the pivot (which is now erroneously placed in the centre of the ground-glass), intermediate between the centre and the top of the box. By this change the focussing can be done in less than half the time, as when hung in the centre.*

M. I see you use a "Ross" lens; how do you like it?

A. I can only say that it is by far the very best I have ever used. For with this little fellow I make my locketts, small cards, imperial cards, 4-4 and 8-10 heads.

M. What! all with the one and the same lens?

A. You have said it.

M. Your camera box must be a "bully boy with a glass eye." It is highly essential, I believe, that the ground-glass and the sensitive plate, in the holder, should occupy exactly the same plane in regard to the lens. Is it not?

A. Don't be too sure of that, Mr. Marshall, or you may be led into a wilderness of trouble.

* Since writing the above I have been visited by Mr. Stock, brother of the *original patentee*, to whom I expressed my views, in which I am most happy to state he *fully concurred*. These opinions are further concurred in by the operators of Howell and Gurney, who certainly ought to know what is most desirable in this way.—ANDERSON.

M. Why, you don't mean to tell me that if—

A. Yes, I do mean to tell you that if—your chemical and visual foci are not 'corrected,' your negative will not be sharp. The focus will be either too far back or too far front.

M. By Jove! I never could get my negatives sharp; the focus was *always* too far back, *back*, *BACK*. I focussed with the greatest care, and I could only get it sharp by moving the ground-glass *back after* sharp focussing. I always imagined something was the matter with my eyes. I thought I was perhaps too *farsighted*.

A. It appears you were not *farsighted* (!) enough to discover the cause. I'll explain it.

M. "Go on, I'll follow thee."

A. Take a piece of paper four or five inches long, upon which is some printed matter, in fine type, running along the whole length of the paper. Set this up in front of your camera (which must stand perfectly level), in an oblique position.

M. What do you mean by an oblique position?

A. The paper must not stand at right angles to the tube, but must be inclined slightly, so that the lettering on one side of the paper shall be nearer the camera than the other.

M. Just so.

A. With a microscope, focus as sharp as possible the centre letters, on the ground-glass (which must, of course, stand perfectly true with the camera). Observe that the letters on the extremities of the paper must be slightly out of focus, the one side being too far back, whilst the other side will be too far front.

M. Prezactly.

A. Now put in your plate-holder (containing a piece of flat ground-glass in lieu of the sensitive plate), and notice very particularly if the paper presents the same appearance in both instances. If *not*, the *plate-holder is wrong* (*provided always this has not been done on purpose*). If, on the contrary, they both coincide, coat a plate and make a negative of the printed slip of paper. Examine the negative carefully, and if it is as sharp in the centre as the

printed slip was, you are all right, for the chemical and visual foci agree. If, however, the ground-glass and the plate-holder do *not* agree, and still the negative is sharp in the centre, this will show that the foci did not agree, and that the plate-holder has been adjusted so as to correct this difference. Finally, if the ground-glass and the plate-holder *do* agree, and your negative is not sharp in the centre, observe *where* it is most sharp, either back or front of the printed slip. If *back*, the ground-glass must be approached *nearer* the lens; if *front*, it must be set further back *from* the lens, and you may easily correct the difficulty yourself.

Now, all being in readiness, Charley will "set for a pictur." And you being the artist, shall make the *pose*.

M. How shall I *pose* him; as a Roman senator, or one of the nine muses? He looks rather like a disconcerted pickpocket at present. By the by, how much time shall I give?

A. What a question! This will simply depend upon, 1st. The quality of the light; 2d. The quantity of the light; 3d. The state of the chemicals; 4th. Size of diaphragm; 5th. Nature of subject; 6th. Nature of background.

M. Is *that* all? Shall I make one or two on a plate? What do you think of this sliding plate-holder arrangement?

A. Provided you make the two exposures *exactly alike*, in position, light, &c., I think well of it, but if you change the positions and light, I consider it a *perfect abortion*.

M. Why, you astonish me. I always thought it a capital arrangement. What is your objection to it?

A. Let me answer (!) that question by asking you another. Coat a plate, and before exposing it, let it stand a couple of minutes in your plate-holder; now expose and develop at once; mark that plate No. 1. Coat another plate and expose at once, but do not develop it for two or three minutes; mark that plate No. 2. Coat another plate, and expose and develop at once; mark that No. 3. Now which do you suppose will be the best of these three, the conditions of light, subject, exposure, &c., &c., being the same in all these instances?

M. Why, the last one, No. 3, I should think.

A. Why?

M. Because I have always been taught that the plate should be exposed as soon as properly coated, and developed with all convenient dispatch after exposure, in order to secure the best chemical effects.

A. Assuredly. But admitting that both, numbers, 1 and 2, are good—

M. Then—they would have been *still better* if they had not been subjected to this loss of time. But no one would think of taking negatives *expressly*, in the manner you have just stated.

A. Oh, my dear sir! you are entirely mistaken. The very fact of taking two differently lighted pictures on one plate, accomplishes this very thing, and what makes the matter *still worse*, is the development. For, in the first instances, should the plate have inadvertently stood too long, either before or after exposure, the development might be controlled, there being but *one* picture to manage, but the case is vastly different in this latter instance: one picture may be entirely over-developed before the other is sufficiently brought out, and you are just as likely to lose the best one; in any event, one of the two must needs be the sufferer. Granting then, that neither had moved, and you save both, still you admit, under the best of circumstances, they would have been "still better" if sooner manipulated. Now suppose one *has* moved, you cannot of course tell which until after development, thus you may possibly, nay, probably, ruin the *best* one in trying to save the worst. Finally you are lucky (for it is nothing but luck), and you succeed in saving the *best* one; you now set to work to make another negative of the other position. Pray, Mr. Marshall, what have you gained?

Just *nothing*; on the contrary, this is a great loss of time. For had you taken both positions alike—1st. Your development would have been easily accomplished. 2d. You would have had a double chance of securing a good picture. 3d. You coat another plate and have all these advantages for your second picture. 4th. And finally, experience proves that, even when both

positions are alike, *more* time must be given for the second exposure. Consequently when the positions and light are changed between the exposures, it required a very practiced hand to determine the times so accurately, that they may both develop together.

M. I never thought of that.

A. Naturally not; you, as the artist, have your mind on the pose and light, but go into the dark-room and ask your *operator* what *he* thinks of it. Believe me, sir, the *only* advantage I see in it, is when you wish to take several negatives all alike (and this must be a case of very rare occurrence), or where you take two with the hope of getting one good one.

(To be continued.)

A Patent Claim for using Hyposulphite of Soda in Photography.

A COUPLE of years ago, when the profession was somewhat excited over the Bromide and other patents, it was frequently asserted in a jocular way, "Why the next claim upon us will be for using hypo!" Sure enough, and without joking, such a claim *has* been made, as the following letter will explain:

WHEELING, W. VA., Feb. 20th, 1871.

MR. E. L. WILSON,

Ed. Philadelphia Photographer.

DEAR SIR: The photographers of this city were called on to-day to pay for the privilege of using hyposulphite of soda! What may we expect next? Some three years ago a patent was issued to H. A. S. Parks and J. H. Van Pelt, of Cumberland, Md., for a "washing compound," one of whose ingredients, we suppose, is hypo soda. Now they say that photographers use soda as a "*detergent agent*," and therefore are infringing on their patent, for which they now demand from ten to twenty-five dollars. We refused to pay anything until we could learn more about it. Hypo has been used in photography for years everybody knows. Now is it possible for any one to claim through any patent three years old or less, the exclusive right to use it. Will you please let us hear your views about it. A few words, also, in the next issue of the *Philadelphia Photographer*, in regard to it, may not be amiss by way of a warning, or

to inform the fraternity what we may look for next.

Respectfully,

BROWN & HIGGINS.

Upon the receipt of this letter we were not disposed to believe but what our good friends in Wheeling were again joking, but, upon investigation, we find that on November 26th, 1867, patent No. 71,256 was issued to Messrs. H. A. S. Park and J. H. Van Pelt, of Cumberland, Md., for an "Improved Washing Compound." A printed copy of their specifications may be had by any one who makes application for it and sends fifty cents to the Hon. Commissioner of Patents. A few extracts from it will quell the fears of our readers, and show how supremely ridiculous it is for any one to make a claim upon photographers, under that patent, for the use of hyposulphite of soda in photographic operations.

The patentees say: "Our invention consists in forming a detergent compound of equal parts of bicarbonate of soda and hyposulphite or hyposulphate of soda. It has long been considered a great desideratum to obtain a compound or fluid that would successfully cleanse clothes, . . . without the use of soap. . . . Our compound most effectively does the work."

They then follow with directions for making their compound, and then say, "What we claim as new and desire to secure by letters patent, is: 1. A 'detergent compound,' of which the hyposulphite or hyposulphate of soda is an ingredient. 2. The combination of the hyposulphite or hyposulphate of soda with the bicarbonate of soda, in equal quantities, so as to form a detergent compound, substantially as and for the purpose specified."

Now, as the "purpose specified" of this "detergent compound" is to "clean clothes," will the gentlemen named be so amusing as to claim that the use of our old, long-tried hypo is covered by their patent? And have they been Rip Van Winkles so long as not to know that hypo was used long before their patent was thought of or they either perhaps? If not, then there is a chance for every photographer to whom they apply for "royalty" to teach somebody else something they don't know.

TRADE CATALOGUES.

SURELY there is now no reason why the photographer of to-day should be guilty of making bad work, on account of bad chemicals or bad tools to work with. He not only has the *Photographic Times* to keep him up to the times, but dealers seem to be vying with each other in the production of elegant price-lists and catalogues of photographic goods. Several of the latter are now before us. One from Mr. C. W. Stevens, 150 Dearborn Street, Chicago, we have before noticed. Messrs. J. W. Willard & Co., No. 180 Bleeker Street, New York, have also issued this month a handsomely printed catalogue and price-list. Messrs. A. M. Collins, Son & Co., the Philadelphia card-board manufacturers, have also presented us with a very beautiful catalogue of their goods. It is interesting to compare this with one issued by them only two or three years ago. The latter was on a simple, small sheet of paper, embracing but few styles; now we have a handsomely-printed book of twelve pages, almost as large as this journal, in a neat cover, describing many new and beautiful designs. This fact proves that photographers are finding out that it *pays* to mount their work handsomely, and that Messrs. A. M. Collins, Son & Co. not only have the ability to get up handsome and tasteful mounts, but that they gladly do so quickly whenever there is a demand.

The last catalogue that has come to us is from Messrs. Wilson, Hood & Co., No. 822 Arch Street, Philadelphia. It is a carefully prepared and elaborate *volume* of ninety pages, about the size of *Mosaics*, printed on fine pink-toned paper and covered. It assuredly excels all others, and is more comprehensive of course. It is, without doubt, the most *complete* catalogue of photographic goods that the trade has ever been treated to, and no doubt every photographer will secure a copy. Accessories, lenses, chemicals, apparatus, frames, backgrounds, coloring, card-board, *everything* is carefully included and illustrated, making the whole a most desirable book of reference, without any hackneyed photographic articles to grease it down.

The Scovill and Holmes Medals.

PARTIES who desire to compete for the medals, offered by Scovill Manufacturing Company and Samuel Holmes, Esq., New York, at the last meeting of the National Photographic Association, for the greatest improvements in photography, are requested to send in their specifications and claims to me by April 20th, in order that the committee on awards may be able to test and examine the same in proper time to make their report. Any photographer, in North or South America, may compete.

Very respectfully,

EDWARD L. WILSON,
Permanent Secretary.
Philadelphia.

GERMAN CORRESPONDENCE.

Peculiarities of Loescher & Petsch's Stereos—A new way of making Stereos with a Single Objective—On the time of floating Positive Paper—The Victoria Card—Steinheil's Wide-angled Aplanatic Lens—The Sensitiveness to Light of the Red Ferrocyanide of Potassium—Medallion Pictures.

IN the "Sphinx" of the January number of your Journal some one asks the question how it happens that in the stereos by Loescher & Petsch, "Gems of German Life," the figures on the two halves of the picture are not of equal size, and how it is possible that nevertheless the stereoscopic effect is so splendid. I answer the first question by stating that Loescher & Petsch employ lenses of *unequal focal lengths*. The focus of the one objective is a little longer than that of the other. The second question is explained by the faculty of the eye to accommodate itself to circumstances, for it has the power to combine in the stereoscope not only pictures of unequal size, but also those which are generally different, provided this difference is not too excessive. I have two pictures of the same person which were taken one after the other; the position is not exactly alike, and still they readily combine in the stereoscope.

Another original question which, however, was not propounded in your "Sphinx,"

but in the German Photographic Society in New York, is as follows: *How is it possible to make a stereoscopic picture with a single objective and without moving the camera?* The gentleman who put the question gave the answer also. He said we take a seven or eight-inch objective, and use a stop with two openings instead of one. The possibility was doubted generally, still it is possible, although not in the manner described above. I will try to explain.

In the April number of last year, on page 131, I wrote to you "On the Effect of Large Apertures," and remarked that in a lens of $2\frac{1}{2}$ inches diameter, the diametrically opposite points are already as far removed from one another as the eyes in our head, and as our right eye sees a little more of the right side and our left eye more of the left side of a sitter, so also does the right and left side of a lens take in more on either side, and hence produces an almost *stereoscopic picture* on the ground-glass.

This really stereoscopic effect which is produced on the ground-glass when working with large lenses, must certainly have been noticed by nearly all the practical photographers. How a stereoscopic picture can be made with a single objective, and without moving the instrument, explains itself very easily. We take a four inch lens of as *short a focus as possible*, and cover with a piece of pasteboard all but one inch of the left side of the objective; we now take a picture; we next cover all but one inch of the right side of the lens, and again take a picture. Such pictures, together, will give a stereoscopic effect, which will be more perfect in proportion as the distance between the object and the lens is shortened.

With a three-inch lens which I covered all but half an inch, I have succeeded in making beautiful stereos of small models of machinery; but a diaphragm with two openings will not answer, as the pictures on the ground-glass will cover each other.

In our Society for the Promotion of Photography, Mr. Prüm gave lately some interesting facts concerning the influence which long-continued "floating" exercises on the positive paper.

A manufacturer sent him a quire of arrowroot paper with the direction to float

it on the silver bath for three minutes. The results were very indifferent; the pictures looked gray and weak, and appeared to be more inside the paper than on its surface. Mr. Prüm tried next what effect it would have if the time of "floating" was shortened. A piece of paper was placed on the bath for only about half a minute, and the result was really surprising; the pictures left nothing to be desired, were vigorous and full of beauty; their beauty was still heightened when they, immediately after sensitizing, were dried with blotting-paper. He obtained pictures the strength of which was equal to albumen prints. The above goes to show that it is not always well to follow the directions of the manufacturers. We, in Europe, generally float too long. I was surprised to learn from Mr. Moore, in Philadelphia, that he floats the Dresden albumen paper for only three-quarters of a minute, while we are in the habit of floating for three minutes. I myself afterwards tried short floating, and found the pictures much more brilliant than before.

The Victoria card gets more and more popular. Grasshoff pushes this new size very much; he has adopted a very simple manner of gaining customers for it. When a person orders a dozen cartes de visite, he prints also from the same negative two or three Victorias, and shows them to the party; generally the Victorias are taken, and in most cases the preference is given to them over the cards.

In my last letter I referred to the new lens by Steinheil, called the wide-angled aplanatic. I have re-examined the lens, and must call attention to the fact that it possesses this great advantage over all the other wide-angled lenses, that even *without* a stop the centre of the picture will be sharp. It is, therefore, very easy to focus, and the sharpness can afterwards be extended to the margin by introducing the necessary stops.

I have lately made some experiments with the red ferrocyanide of potassium in order to ascertain its sensitiveness to light. This substance is decomposed in the light, almost more rapidly than the salts of silver. A solution of the salt darkens, when exposed for only a few minutes to the sunlight;

it contains now *yellow* ferrocyanide of potassium; at the same time a blue powder will be precipitated. Pictures can easily be made with this salt. A sheet of plain paper is floated on a solution of the red ferrocyanide for about a minute; the strength of the solution is 1 : 10; the paper is dried. It has a light yellow color. If such a paper is exposed under the negative the resulting picture will show a light blue color, and by dipping the paper into a solution of chloride of iron, the color will change to a dark blue. Prussian blue is formed from the yellow ferrocyanide which was produced by the light.

Such pictures have been made before, but in an entirely different manner; chloride of iron paper was exposed to light, and afterwards developed with a solution of the red ferrocyanide. These blue pictures offer very little interest, but we can also make brown pictures with the same red ferrocyanide. After exposure, the paper is dipped in a solution of uranium, a brown precipitate is formed, which gives to the picture a very pleasant tone.

Similar effects of the light play an important part in the chemical processes. The reagents are decomposed by the action of the light and the chemist is not aware of it. I notice, for instance, in several of the handbooks of analysis, that directions are given to add alcohol to the solution of the red ferrocyanide in order to make it more permanent; this addition, however, will produce exactly the opposite effect; the alcohol will prevent the solution from spoiling in the ordinary sense of the word, but it cannot prevent the decomposition which is caused by the action of light.

Lately a kind of card has made its appearance, which, although not exactly new, has only recently become fashionable. It is called the medallion picture. Cartes de visite or Victorias are pressed oval in such a manner that the picture projects in RELIEF, exactly in the same manner as was formerly the case with the diamond cameo portraits or the gem picture. These pictures have the fault that pressure will injure them, and they require a frame for their protection.

Photography is subject to the laws of

fashion. From time to time the public demand something new, and these pictures may, perhaps, gratify the public whim for a few weeks.

Burnt-in pictures are bad off in Berlin. Mr. Grüne, the inventor of the process, left the city. The business passed into other hands, and lost rapidly the favor of the public.

Yours, very truly,

DR. H. VOGEL.

CORRESPONDENCE.

DEAR SIR: In the January *World*, it is stated that "in Cincinnati two of the leading artists each were awarded 'a big medal' for their productions. Now it would have been a satisfaction all around to have known whose work was best, but we are not told."

This is a mistake. The judges awarded to me the first premium; Mr. Landy, second; Mr. Porter, third. The Executive Committee, in awarding the premiums, gave three silver medals of the same size, but by some oversight, in the first publication of their report, failed to mention any distinction as regards merit.

I immediately sent word to the Executive Board, pointing to the error, which they immediately corrected, by having engraved upon my medal, "First Premium for Photographs, awarded to Leon Van Loo."

LEON VAN LOO.

UNDER THE SKYLIGHT.

BY ROLAND VANWEIKE.

VII.

A Stormy Day.

WELL, Focus, we are having some rough weather this morning.

"Yes, sir, I guess you won't have much to do to-day."

Indeed! this is just the day to be busy. I don't know how we should get along without such a day as this once in a while.

"Why, you won't have any sitters to-day."

Don't want any, Focus; but there is enough to do without sitters. The rain and sleet are coming down good. There's a leak in the skylight, Focus; we must attend to that.

"Well, but we can't fix it now."

No, but we can see where it is and have it attended to some pleasant day. We won't be like the man that failed to mend his leaky roof because when it rained he couldn't get out to mend it, and when the weather was pleasant it didn't leak.

"Was he a photographer?"

I think not, Focus, unless one of the *old foggy* kind, for all "live" photographers are too wide awake to admit of that style of reasoning.

Then there are the curtains; take them down if necessary, and brush the dust out of them; see if any stitches are needed; some of the cords are well worn and must be replaced by new ones. That old curtain, that is so stained by leaks from time to time is an unsightly thing, and we will have a new one in its place. We are apt to let anything of that kind run too long sometimes, and no matter how nice we may have everything about the room in the way of furniture and well-kept walls, yet if an old rag of a curtain, soiled by leaks and dust, is suffered to remain, it mars or spoils the whole. It is very important that everything about the gallery should be kept looking fresh and clean; there is no better evidence of enterprise and prosperity.

"I believe that is so. I was id to Mr. Dolittle's place the other day, and everything looked dirty; the carpets were ragged, the furniture battered and dusty, and the pictures on the walls and at the doorway looked as though they were made five or six years ago, and he never seems to be doing anything."

Well, Focus, that's the way some men go along; and it reminds me that I want to change some of the pictures we have here. There's that frame of cards; I've been collecting some specimens of the styles we have been making lately, and we will put them in that frame to-day. My policy, Focus, is to exhibit the work we want to make, and keep constantly adding fresh specimens of our latest productions. Some of those pictures that have been hanging for some time may be taken down, the glasses cleaned and the frames well wiped and dusted; a little brightening up will make them look as well as new.

"Well, I don't see but that we are likely to have enough to do to-day after all."

Yes, I think so, but we have only commenced yet. Bless me, here's a sitter! Our storm has turned to snow, and the light is well covered, and still it comes down thick and fast; a fine prospect for a sitting.

Rather doubtful about getting a picture of you to-day, sir.

"Well, I thought this was the best kind of a day, when it was cloudy."

Yes, but this is a little too cloudy for our purpose, but we will see what we can do for you. Focus, I think this man must have patronized those "rain or shine" fellows, and got some rather loose ideas in reference to what conditions are necessary to do good work. Suppose you get out and push off some of the snow from the light, and see what we can do.

Now, sir, you may take a seat. The light is slow, and will require a long sitting, but if you can keep still long enough we may get you a good picture.

"My eyes are light and rather weak, so I thought this would be the best kind of a day."

The light will be easier for your eyes, but the length of the sitting may more than offset that advantage.

Now, Focus, we will get a good side-light effect on this sitter, as our principal light must come from the side, and if he has good nerves we may succeed.

"I should think this was rather a *side* performance in our day's programme."

Yes, Focus, this will be a *snow scene* (seen *on the skylight*! Give about a minute and a half exposure. . . . Rather doubtful, Focus; the tears are running down the poor man's face, and I think he has moved? What is the verdict?

"He moved."

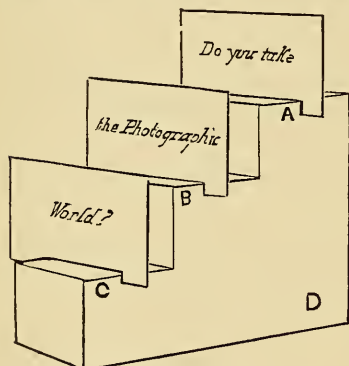
Well, he must come when we have a better light. If people knew how much we needed a stormy day occasionally, they wouldn't trouble us such a day as this.

Now we must look after these cameras, and see what they need. If there is a screw-hole or chink in the woodwork, or break in the bellows, that would admit a ray of light it must be hunted out and reme-

died, or it may give us trouble at some time when we can least afford it.

"I think these cameras need greasing some."

Yes, the castors on the stands may be oiled, but where there is any friction of the woodwork it may be lubricated best with a little spermaceti. Paraffine or black lead will answer the same purpose. The ground-glasses must be looked after, and see if they are in focus. I have noticed lately that there seems to be a slight variation with some of them. The plate-holders swell sometimes when they begin to get old and leaky, and do not register with the ground-glass. The easiest remedy is to change the latter till they focus alike. The best method I have seen for testing the correctness of the focus is to take an arrange-



ment of this kind; *D* is a piece of board, a foot long and six or eight inches wide, cut in this shape; *C*, *B*, and *A*, are good stout business cards, with printing on them of course, put in slits at right angles with the edge of the board, and the face of each card towards the letters, in the diagram. This we place in front of the camera, at about the distance we would make an ordinary sitting, and focus on the middle card; the others will then be out of focus, and it is important that you have them both alike, that is, taking it for granted that the cards are equidistant. Now prepare and expose a straight plate, and if the focus comes the same as on the ground-glass we are all right, but if *C* is sharper than *B*, or *vice versa*, then the ground-glass must be regulated till it is right.

"Well, that is a funny idea; I've often wondered what those three little steps were for."

Those are the three steps we climb up to see the focus. Now, the next thing is to look after the lenses, and see what condition they are in.

"I've got one here I wanted to try, and see if it's good for anything. A friend of mine had it, and said he would sell it to me cheap, as he didn't know as it was good for much."

Let's examine it, and see what it's made of. Well, I don't wonder that it is good for nothing; here's the two back lenses tumbled in together, the ring that should separate them gone, and the outer or biconvex lens turned wrong side out. Now, Focus, I'll show you how it is wrong, so you may never fall into the same trouble. This lens of ours, you see, has this ring between the lenses in the back combination, and the biconvex lens is the flattest side out. Any one not acquainted with the construction of a lens is very liable to get this transposed, and spoil the working of the instrument.

You might even have studied the various works on photography, and the descriptions of various lenses, with diagrams illustrating their forms and combinations, and not be aware of this important item.

"I know it; I've got 'Hardwich's Photographic Chemistry,' and he tells all about lenses, but he didn't say anything about this."

Exactly, he gives diagrams that would lead you to suppose both sides of that lens were convex alike, but you see it is *not*; the side next the concavo-convex or meniscus lens is the most convex, the outer side being quite flat, so that, if perchance it is turned, the surfaces of the two lenses do not harmonize, the rays of light are somewhat confused, and the instrument gives very little focus. Hence the necessity for a little practical knowledge about these things. Theories are all right so far as they can be reduced to practice, but there is no teacher like experience. Do you understand the theory of the chemical and visual focus?

"Why, yes; I was just thinking about it as I was looking at these lenses, and no-

ticed the difference in the color; it seems singular."

It is quite wonderful how the invisible rays of light may be harnessed into these lenses, and driven to the precise point we want them.

As for your old lens we can put a ring of wire in, as near the size as we can estimate, and when properly put together it may be a good instrument.

But what I was coming at about these lenses was to have them well cleaned. Take a piece of soft cotton flannel and a camel's-hair brush, and wipe and dust them carefully. The tubes also need dusting out before the lenses are replaced. A careful and thorough cleaning will make a difference in their working that will be very apparent. They should not be neglected, however, stormy day or not, till they get so dusty as to interfere with their working.

After the lenses, have a general clearing up of the room. With a wet cloth or sponge wipe every place where dust may lodge, clear off every shelf, table, or corner where rubbish may collect, and put everything necessary in its proper place, and those that are not needed here find a place for somewhere else. Occupied in this way the stormy day proves one of the most satisfying and profitable of all the week.

The Extension of Woodward's Patent for the Solar Camera.

As announced in our last number, Mr. D. A. Woodward has obtained an extension of his Solar Camera Patent for seven years. This extension was faithfully resisted by the Executive Committee of the National Photographic Association, Henry Howson, Esq., your old bromide lawyer, having been employed as counsel in the matter. All proper means were employed to bring every particle of evidence in favor of a non-extension to the notice of the Board of Examiners, and at the hearing the case was argued by Mr. Howson. In addition to this the protest of the Executive Committee was filed with the Commissioner of Patents. The Pennsylvania and the St. Louis Photographic Associations also filed protests against the extension, and every effort that

could be made was made to prevent the extension of the patent. And as will be seen, these efforts were not without effect entirely, for although he has an extension, Mr. Woodward has been obliged to file a disclaimer, which renders his patent more clear.

In order that our readers may fully understand just how they who use solar cameras now stand related to Mr. Woodward, we make the following extensive abstracts from the report of the Examiners in Chief at the Patent Office, before whom the hearing of the arguments for and against the extension were made:

"The principal questions presented are upon the novelty of the applicant's instrument, against which the principal examiner has reported in most decided terms, and which is extensively condemned by experts in the art. To understand its merits it becomes necessary to consider the peculiar objects the applicant had in view when he framed it, and the devices by which he accomplished them.

"The first was to throw as much light as he could upon the sensitized paper or canvas, upon which the image is to be impressed.

"It was intended for large figures, and therefore required more light in proportion than ordinary photographs.

"The actinic rays only are relied upon for producing the effect, and that within a limited time, and the degree of illumination which would answer for solar microscopes and the like, is insufficient for the purpose.

"The patentee, therefore, not only uses a large convex lens to gather the sunbeams as is not unusual, but he places the other lenses at or near the focus of the first one. He thus avails himself of all the light he can gather in the first or condensing lens.

"Another object which he sets before him was to enable him to take images of any required size. This depends primarily upon placing the canvas [or paper? *Ed.*] at the proper distance from the instrument, which can be done with comparative facility. It then only remains to adjust the lenses and the object, so that the light from

the object will be brought to a focus on the canvas.

"In all similar apparatus this is effected by shifting the position of the lenses, and sometimes of the slide also. This cannot be done in Woodward's instrument, because the distance between the lenses is a fixed one. For though there is a provision for changing the position of the inner lens, that is, in order to adjust it to condensing lenses of different foci.

"When the lenses are selected and adjusted as described they can be moved but very little. If the distance between them is materially changed, more or less of the light which has been collected will be lost.

"The expedient which Woodward adopted, therefore, is to shift the negative back and forth from one lens towards the other, until he finds the light from it concentrated on the canvas, so as to form a well-defined image.

"In his mechanical construction for this purpose consists the second part of his invention.

"The combination of these two features, that of placing one lens at or near the focus of the other, so as to gather upon the canvas all the light entering the instrument, and that of bringing the light from the negative to a focus upon the canvas, after that is adjusted by shifting the position of the negative, is *not to be found in any optical instrument* to which reference has been made, or which has been brought to our notice.

"In the one, for instance, described in the *Photographic and Fine Art Journal* for April, 1856, vol. ix, p. 118, the negative is stationary, and the adjustment is effected by shifting the canvas and the lenses. In every case one or both of the means are resorted to.

"In no one before Woodward's is the adjustment effected after the position of the canvas and the lenses are determined, by merely moving the slide containing the image to be copied. The position of the lenses is changed, not merely in relation to the slide, but in relation to each other, so that more or less light is lost.

"It is objected that the change instituted by the applicant is one of an obvious char-

acter, such as mere judgment and skill of the operator would suggest, and especially that the principles upon which the instrument operates are all old and familiar to those possessed of science and skill in the art.

"The latter assertion is no doubt true. But the novelty of the instrument does not consist in the operation of it, when once adjusted. It lies in its capacity of employing abundant light, and at the same time of being adapted to taking a picture of prescribed dimensions, and being readily adjusted for that purpose.

"This branch of the objection is abundantly answered by the description taken in a suit brought in Baltimore by the applicant against Christopher Dinmore for infringing this patent.

"They were uncontradicted, and established beyond all doubt that this instrument wrought a revolution in the art, and was eagerly adopted everywhere as soon as it was made known.

"Had it been so obvious to the mind it would have been produced long before, when there was such a manifest call for something of the kind.

"In order to facilitate the operation of the instrument, the applicant employs an achromatic glass for the inner lens. This, however, is a well-known expedient among photographers, extensively if not universally employed by them, to perform the same functions, and for the same purposes.

"The patent contains two claims. The first is for an instrument which serves both as a camera lucida and a camera obscura. It cannot be used for the first instrument; it may indeed be made to effect the same object. So may a number of other optical instruments. That does not make it a camera lucida nevertheless, and the claim cannot be sustained.

"The second claim is in these words: 'The arrangement and combinations of a condensing lens or lenses, negative slide or holder, and achromatic lens or lenses made adjustable with regard to each other for condensing the sun's rays upon and through the negative, and focussing them upon prepared paper, canvas, or other suitable material for photographic purposes as described.'

"The photographic lens is an old device, as has been observed, and there is no instrument of the kind which does not as a matter of necessity bring the light to a focus, and if the claim required nothing more than these two features it could not be sustained. Upon the hearing of the case which has been mentioned above, it is evident that the learned judge who presided (Giles), interpreted as comprehending something more, and he sustained the patent upon the ground that some of the instruments which are alleged to anticipate Woodward did not, as he expressed it, focus the light upon the photographic lens. He must have understood the claim, therefore, as embracing this feature also. He had a warrant for this in the word '*condensing*,' which is evidently used in the patent as meaning something different from bringing to a focus, and may well be understood in the claim to signify gathering all the light which enters into the instrument, to operate on the canvas by concentrating it on the inner lens, as *described in the specification*.

"It was the duty of the judge to put that construction upon the patent which is most favorable to its validity, and he went no further in this instance than other judges on repeated occasions.

"The *second claim* ought therefore to be held valid upon the construction which has been set forth, especially as there is such high authority for it; at the same time, it ought to be corrected *so as to render it more clear*.

"This may be done by filing a disclaimer of the *first* device claimed, and of all instruments named in the *second claim*, EXCEPT such as have the inner lens placed at or near the focus of the other."¹⁰

Upon this report being made Mr. Woodward filed a disclaimer.

The following is the language of the disclaimer, filed by Mr. Woodward, the second claim remaining apparently as it was before the extension.

"Your petitioner therefore hereby enters his disclaimer to the first claim set forth in said specification, and also to all photographic instruments EXCEPT those in which the achromatic lens is placed at or near the focus of the condensing lens, so

that the light from the latter may pass through the former.

"D. A. WOODWARD.

"February 23."

- The clause in the disclaimer beginning with the word "except" may now be considered as taking the place of the first claim which has been dispensed with.

Upon this disclaimer being filed, Mr. Woodward was granted an extension of his patent for seven years. He has not yet informed us of what his intentions are towards photographers hereafter, except to say in a private letter which we have just received from him, as follows:

"The Executive Committee of the National Photographic Association had the legal right to oppose the extension, and no doubt thought they were right. But it has been decided differently, and I would assure you that I entertain no ill will or enmity to any concerned.

"But all I desire is to recover what I am entitled to, and what I have been obliged to expend unaided in order to sustain the patent in a heavy and expensive lawsuit before the United States courts. In order to accomplish this I do not intend to exact exorbitant sums or royalties from any one."

This sounds right, and we feel sure that so long as the patent is in Mr. Woodward's hands that photographers need not fear imposition. We shall use our best efforts with him to make his royalties as light and favorable as possible. We only hope that he will hold on to his patent, and not allow it to fall into the hands of such parties as nursed the Bromide Patent during its last sickness.



GOSSIP.

THE membership of the National Photographic Association constantly grows. Photographers are beginning to see "the good there is in it," the good of supporting an

association whose officers are constantly on the alert for anything like imposition or fraud upon the fraternity. That the National Photographic Association *does* this, most substantial evidence has now been frequently given, and no live photographer should fail to identify himself with it. The *greatest* good of the National Photographic Association in the particular direction we have named, is in its acting as a *preventive*. It stands like a great monitor at the mouth of the river heading off all blockade-runners and privateers who would run in and commit depredations were it not constantly on the watch.

The *Exhibition* is now only two months distant. Some magnificent work is coming from England, Germany, Canada, &c., and many of our best American photographers are making great preparations. Now a word to those who are intending to exhibit. Send only your best work. Let quality, not quantity, be your guide. If you have the right spirit in you, you do not exhibit merely for advertising purposes. The great good of an exhibition is to enable one to study the work of others, that a general improvement will follow. Many of you seldom see any work better than your own. Send your best to the Exhibition, and then come and compare it with that of others. If you find you are beaten, then pluckily go to work and equal the best. In this spirit you should exhibit, and in this spirit you should come to the Exhibition. Nothing will give a man so good an idea of his true position as comparison, and nothing will advance the art so much as such exhibitions for comparison. The thousands of the public who will examine your pictures in Philadelphia, will do so with curious eyes, to see what photographers can do. *You* examine with critical eyes to see where you fall short and how you can improve. Come, and you will be benefited.

PENNSYLVANIA PHOTOGRAPHIC ASSOCIATION.

THE stated meeting of the Association was held on Monday evening, March 13th, 1871, at No. 822 Arch Street, Philadelphia, President Rhoads in the chair, and about forty members present.

After roll call and reading of the minutes, five propositions for membership were made.

The committee appointed at the last meeting to solicit subscriptions to the Schoonmaker Fund, reported progress, and were continued.

The proposed amendment to Article IV of the By-laws was adopted.

The motion to amend Articles V, VI, and VII, was discussed pretty warmly for some time, and finally postponed indefinitely.

Messrs. Trask, Chute, and Moore, were appointed as a committee to revise the By-laws.

The Secretary read the following letter from Dr. Vogel, in response to the one informing him of his election as an honorary member of the Association.

BERLIN, February 17th, 1871.

DEAR SIR: Your kind letter of January 17th, informing me of my election as an honorary member of the Pennsylvania Photographic Association, has afforded me much pleasure. My absence in Sicily has caused delay in responding to you sooner, but if my thanks are slow in reaching you they are none the less sincere.

I shall never forget the pleasant hours I have spent in the company of members of your Association, nor the amiable hospitality which they extended to me during my pleasant stay in Philadelphia.

I accept the honor you have done me as a token of your leniency in judging of my feeble efforts, and it shall incite me to further action in promoting the interests of our beautiful art.

With my best thanks and salutations,

Very respectfully, yours,

DR. H. VOGEL.

The reading of Dr. Vogel's letter was received with applause. The reading of the original, in German, was insisted upon by some of the German members, and it was done by Mr. George Rau.

Mr. Chute then addressed the meeting as follows:

At the last meeting of the National Photographic Association, a committee was appointed to consider the subject of apprenticeship, and report next June. It is a subject which *all* should think upon. We know how we have all suffered from incompetents

as assistants, and we who are competent operators know how we have to suffer by incompetents undermining us, and bringing down the rates of salary. Better knowledge should be had by those who attempt to follow our profession, and some stand in the matter should be taken, some system of education instituted. There should be a standard of work which all should be made to attain before being entitled to consideration as photographers.

Some of that committee were members of this Association, and if the members would express their ideas on the subject they might serve the cause.

Mr. Trask, a member of the committee, said the subject was a difficult one to handle, and, although he had talked with many, he had had but few ideas thrown out. He thought the first step would be to have a place to educate aspirants to photographic honors—a model studio as near perfect as possible in every way, with proper teachers and manipulators.

Considerable discussion followed, the general decree being that *some* system of apprenticeship *must* be instituted.

Messrs. Moore and Wilson called attention to the fact that the next Exhibition of the National Photographic Association was to be held in Philadelphia, and expressed the hope that all the members of this Association would be true, and do all in their power to make the affair a success, and the visit of their co-workers here a pleasant one. This sentiment was responded to with loud applause, meaning *we will*.

Messrs. Hood, Trask, and Rhoads, were appointed a committee to procure a badge for the members of this Association to wear during the Exhibition, that they might be known by their visitors.

Mr. S. M. Robinson was appointed to read the next paper. Mr. Schreiber, the appointee for this evening, was absent.

On motion, adjourned.

PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.

STATED meeting held March 1st, 1871.

The minutes of the last meeting were read and approved.

The President introduced Mr. O. H. Wil-

lard, who gave the Society an interesting account of the photographing of the eclipse of the sun at Jares, Spain, December 22d, 1870. The eclipse, Mr. Willard said, commenced at about 10.25 A.M., and lasted till 1.20 P.M., totality occurring at noon, and lasting two minutes nine seconds. In photographing the totality, he used the full aperture of a 6-inch object-glass of 8 feet focus, giving an image of the sun $\frac{7}{8}$ inch diameter. Exposure one and a half minutes. Heavy clouds obscuring the sun during the remainder of the totality, only this one exposure was practicable. There were so few sun spots that it was difficult to focus. About fifteen pictures were made before totality. The weather was like ordinary spring or fall weather, and the sky not perfectly clear.

Mr. Willard remarked upon the courteous behavior of the people of the vicinity towards the members of the party, they not being annoyed by interference with the apparatus, or in any other way.

The instrument was one of Alvin Clark's make, and the visual and actinic foci were coincident.

After adjournment, Mr. Willard exhibited a positive of the totality in the sciop-ticon.

ELLERSLIE WALLACE, JR.,
Recording Secretary.

FERROTYPERS' ASSOCIATION OF PHILADELPHIA.

THE regular monthly meeting of the Ferrotypers' Association was held at Mr. Trask's gallery, No. 40 N. Eighth Street, Philadelphia, March 7th, 1871. D. Lothrop, President, in the chair.

Minutes of the last meeting were read and approved.

Messrs. Joseph Butterfield, Frankford Avenue opposite Marlborough, and A. N. Cadman, Jacksonville, Ill., were elected members of the Association.

A motion, that members that joined the Association after September 1st, 1870, be exempted from paying the annual dues for this year was adopted.

Letters were read from the Phenix Plate Company, Worcester, Mass. The letters

were received and the thanks of the Association voted for plates received, and further notice promised after the next meeting.

Pictures were received from Mr. C. C. Sherwood, Peekskill, N. Y.

Mr. Charles McAllister received the highest number of votes for the best ferro-type.

Adjourned, to meet at Mr. Lothrop's gallery, No. 43 N. Eighth Street, Philadelphia, April 1st, 1871.

C. L. LOVEJOY, *Secretary*,
500 S. Second Street.

THE CHICAGO PHOTOGRAPHIC ASSOCIATION.

At a meeting of the photographers of Chicago, held at S. W. Sawyer's studio, 24 Washington St., Wednesday evening, March 1st, 1871, A. Hesler, Chairman, the preamble, constitution and by-laws were adopted.

The following officers were elected for the ensuing year:

President, A. Hall; *1st Vice-President*, S. W. Sawyer; *2d Vice-President*, J. H. Abbott; *Secretary*, G. A. Douglass; *Treasurer*, P. B. Greene; *Executive Committee*, A. Hall, A. Hesler, S. W. Sawyer.

After the election of officers, the President, Mr. Hall, thanked the Society for the honor conferred, and congratulated the photographers of Chicago upon having successfully inaugurated a society for their interest and advancement, which he was sure would live and reflect credit upon its members and the city of its birth.

Mr. Hesler gave the Society some excellent advice as to its management, and the manner in which an interest could be maintained in its meetings, closing his remarks with a hope that the members of this new Society would not relax its efforts to stand among the first of the associations of the photographic world.

The Chairman, Mr. Hesler, appointed the following members to present papers on the subjects named, to be read at the regular meeting of the Association to be held on the first Wednesday evening in April. J. H. Abbott, subject, Posing; S. W.

Sawyer, subject, The Negative Bath and Results; Mr. Kihlholz, subject, Printing.

On motion when the Society adjourns it be to Wednesday evening, March 8th, to S. W. Sawyer's studio, and the subject for discussion be "Collodion."

After transaction of further business, adjourned.

G. A. DOUGLASS,
Secretary.

LITTLE DROPS OF GOLD.

BY YOUNG CHLORIDE.

Old Argentum, my best thanks; I will endeavor to be your good "nephew," and since you really seem to be interested in the boys, in the National Photographic Association, in the Exhibition, and in all matters pertaining to *progress*, I will neutralize my fears concerning you, and endeavor to change the tone of my remarks. I shake hands as you offer, in the *February World*, and express my willingness to work with you and your boys for the progress of our art. Let us all try to do something towards that end, by holding up the hands of our friendly editor, in his efforts in the same proper direction. I wish you lived near Philadelphia, where you, your boys, and I, could occasionally have a chat together. Tell them to write to me and give them my best regards.

The Photographic World for February really exceeds itself. It seems to have recovered from the shock it received at the very beginning of its contest for the victory, and comes up promptly with its second number, smiling and fresh, with a glorious picture, by the greatest of out-door photographers, Mr. G. W. Wilson, with matter from all parts of the world terrestrial,—valuable and interesting. The department devoted to "Photography Abroad" is full of valuable hints, too good to lose.

I had more to say on your February No., but you crowded me out last month. Your *March World*, with all due respect to the *Photographer*, is, I think, the most practically *useful* and valuable number of any journal you ever issued. Indeed, I don't think I ever saw anything published in the photographic line that has done me so much good, or taught me so many practical les-

sons. First is the illustration showing the lighting, posing, composing and exposing of *twenty-five pictures of one person*, by Mr. Grasshoff; then your practical remarks on the same in conjunction with Mr. Grasshoff's letter; again, Herr Petsch's admirable paper on "Portrait Photography," with your valuable chapter on "Position and Composition," bearing on the lesson of the picture, together really make up a *complete work*, grandly illustrated, on the subject of managing and treating the sitter. Too much cannot be said for it, and it cannot be read and studied too extensively, so I beg all to get it and read it, and study it with eyes and brains awake.

I am glad to hear from Rev. Dr. Morton again, whose poetical papers are always welcomed by the readers of *this Journal*. He is the father-in-law of John C. Browne, Esq., and the father of Prof. Morton, so you may know he is well posted on photography. Mr. Simpson's "Notes," I am glad to see a "regular thing" in the *World*. It would be less presumptive, on his part, to call what he writes "Drops of Gold," than it is in me. "Old Argentum" "splashes" well; nothing to tone down, so I let him alone. His head is right. Thanks for your articles for the "boys," so practical and so good. They will help rear up good photographers. Your new contributor, Mr. Geo. W. Wallace, with his "Short Photographic Sermons," promises well. All sermons are best "short," and he shows good sense in this respect as well as others. I shall enjoy him, I know. Mr. Benecke's "Dodges" are admirable. He is full of just such things, as I have found in conversation with him, and I hope he will give us a whole gross of similar dodges. "Position and Composition" I hope will be appreciated. The illustrations are fresh, and such as will make an impression on the mind, and fasten them in the memory. *Go on.*

"The Hypo Club" had a lively time at their last two meetings. I was there as a spectator, and as you publish the proceedings so carefully, it would be hypo-critical in me to go into details here. Burlesque, as the thing may appear, there is much good sound sense in the "Club," and I hope they

will work away and club the shell off of everything, until we get at the "true meat."

The Photographic Times.—Although you announced it would be the case, still I was surprised to find the *Times* come with every number of the *World* and the *Photographer* too. I didn't know a *trade journal* could be made so lively and fresh, and I hope the efforts and liberality of Scovill Manufacturing Company will be fully appreciated. Reader, do you get the *World* and the *Times* regularly? If not, by all means manage it so you will.—But I must drop.

ROSS LENSES.

(Continued from page 41.)

In our February number we stated what we had found by actual trial to be the special qualities of the Ross lenses generally, and now we proceed, as we then promised, to give an account of what we have found certain grades of these lenses capable of doing.

The first great requisite in a well-furnished atelier is a *first-class carte de visite lens*. Mr. Ross has given special attention to the production of such lenses, and has succeeded beyond all of his competitors. The lenses known in his catalogue as the "Quick-acting Carte de Visite Lenses" are the ones to which we now refer. They differ from ordinary portrait lenses in respect to their being corrected to project a figure standing in an erect position on a perfectly flat plane, and this when a very large aperture is employed. They not only do this, but also have their actinic correction so made as to place the varying planes of the person in sharp focus, no diaphragm being required under ordinary circumstances. There are numerous occasions in which the employment of a diaphragm may be desired; for example, when it is found necessary to bring the figure closer than usual to the camera, when two or more figures are to be taken on the same plate, or when it is desired to make the background and accessories unusually sharp. The field is absolutely flat, not merely on the area that the carte-figure occupies on the plate, but for a sufficient addition to this area to meet all requirements of an abnormal kind. When dia-

phragms are used, the field of sharp delineation is considerably extended; hence, although these lenses are specially constructed for cartes, they really may be used in the production of pictures of much greater size. They are constructed to give the flattest possible field *with good marginal definition*, have their chemical and visual foci coincident, and give the images of objects in their true perspective places. They have Waterhouse Diaphragms and rack-and-pinion movement.

We have tried several of these lenses of all the sizes, and they *do more* than any instruments we have ever tried, coming up fully to what we have said above. The No. 1 we find excellent for small figures, but rather small for vignettes. No. 2 is better for the general work, but our decided preference is for No. 3, for they accomplish *all* classes of card-work. They seem almost *alive*, creating images that charm and cause one to wonder—cut sharp, round, crisp, yet soft, free from fogginess, and exquisite in detail. Several of our correspondents who have these lenses have affirmed all that we have said concerning them, and much more could be added.

The following table, showing the greatest distance required between the subject and the focussing screen, to produce figures $2\frac{3}{4}$ inches and 3 inches with each of the lenses (the standard being 6 feet), is given as a guide to photographers in their selection of a lens suitable for the length of their operating rooms:

		For $2\frac{3}{4}$ in.	For 3 in.
No. 1	Carte de Visite Lens,	14 feet,	$13\frac{1}{2}$ feet.
" 2	" " " "	16 "	$14\frac{1}{2}$ "
" 3	" " " "	20 "	$18\frac{1}{2}$ "
" 3 A	" " " "	20 "	$18\frac{1}{2}$ "

The No. 3 A card lens we have never tried. It is claimed to be a matchless lens for portraits of children or paralytic persons, because of the enormous amount of light it commands. Even with a light which would be too feeble for common lenses, the evanescent smile on a baby's face may by one be easily secured. For the same reason, it will answer for taking portraits in an ordinary room. When working with full aperture in a strong light, the exposure required is so short as to require a shutter with a

trigger movement. By means of the diaphragms the exposure may be extended to any required degree. No doubt it will do all this. For testimonials concerning them we must refer our readers to our advertising pages. We are glad to see that our friend Mr. Kurtz finds them to be all we can say for them.

The *Cabinet Lenses* have all the characteristics of the carte lenses, but are larger in size and longer in focus. When we first tried one of these lenses we were bewildered. Accustomed as we were to focussing other lenses with the full opening, and then stopping down to what we considered would secure proper sharpness, we proceeded in the same way with the Ross Cabinets. In fact, our experience was the same with the card lenses. We made the exposure, and having heard so much of the quick acting qualities of these lenses, we made it short. On developing, we found the plate under-exposed. We next used a larger diaphragm, exposed the same time, and found we had over-exposed. This was a poser; but after awhile we *learned how to use the lens*, and now we secure the softest, richest, roundest kind of results. Our friend Mr. Fennimore shared our bewilderment, which occurred while we were making the negatives of Mr. Childs for the first number of the *World*. After understanding the lens, he refused to let it leave his studio again, and purchased it at once.

Mr. Kurtz was also *prejudiced* (as he confesses) against any but a certain make of lenses, but once getting a taste of work by a Ross, he wisely holds on to the lens. The No. 3 Cabinet Lens will make anything, from a small locket to a whole-size picture, quickly and well. Nos. 2 and 1 are equal in quality, of smaller size. Admirable for children and old people, and the exposure is in the power of the stops. Next month we will add a few notes on the Ross View Lenses.

WHERE a tendency to mealiness exists, fuming with ammonia will often be found a remedy. The same operation will generally aid in giving sensitiveness, vigor, and depth of tone to your prints.



SPHYNX.

As there were no queries last month we have no answers this. We are obliged to lay over a number of *queries* for want of space. They will be inserted in turn.

Queries.

1. I made a porcelain collodion after the following formula: Atwood's alcohol and concentrated ether, each 4 ounces; gun-cotton, 48 grains; nitrate of silver, 40 grains; chloride of strontia, 24 grains; tartaric acid, 8 grains. Silver was dissolved in the ether and alcohol by triturating in a mortar. Gun-cotton was here added, followed by the chloride and acid. After well shaking, and before allowing it to settle, a plate was coated, dried, and printed, with good result. On returning to the bottle, immediately after coating the plate, the contents had become solidified, to the consistency of jelly. Neither by adding ether, or alcohol, or a mixture of the two, could the flowing qualities be restored. Can any one tell the cause of this "thusness?"—ALSACE.

2. Will some subscriber of the *Photographer* tell me the best mode of taking a photograph of ice piles in the lake?—B.

3. If a photographer has a good light, and works his chemicals right, in fact, if he has the facilities, and makes good pictures on an average, then if he makes a good, clean, clear, and sharp negative, with good position and lighting, and the subject objects to the picture, what shall a man (artist) do? What shall he say? What is the remedy? What would you do? You who hear us complain from all directions, can you answer through "Sphynx?"—JUSTICE.

4. After silvering my albumen paper, it always curls badly, causing uneven drying, and much trouble in handling. I silver in $\frac{1}{4}$ sheets, and pin up by two corners, having one a little lower than the other, and blot off the solution from lowest corner. What is the best way of preventing this curling?

5. In silver solutions for albumen paper, the nitrate of various salts, principally ammonia, is now being much used, and highly praised. Will some practical worker give an article upon this bath? How is it best worked? What are its symptoms of exhaustion? How best strengthened? Its proper hydromic tests? Does it soon become charged with albumen? How does this condition affect the hydrometer? and how is it best gotten rid of? And finally, when it fails, is it best to boil down to fusion, and burn up the albumen, or does this boiling down affect the original nitrates, or must it be precipitated? Now, bear in mind that most of the "weaker in the art," are not chemists enough to precipitate and recover silver from its compounds or solutions, and I am fully convinced that simple as it may seem, the printing department, from its apparent simplicity, has been so much neglected as to be left behind by the progress in our art until it is now our "*weakest point*," otherwise, how is it that some artists are working their brains out to *increase "intensity"* so as to make brilliant prints, while others get such fine prints from mere shadows of a negative, so to speak? I want to learn.—H. B. H.

6. I would like to ask "Sphynx," what causes the collodion film to split off from the plate, when dry, where there has been a short exposure.—H. H. F.

7. Please tell me how to make gum for sticking paper for ferrotypes.—N.

ON account of a blunder at the bindery, about one hundred copies of our February number, we find, went out with 16 pages of a number of the *World* in them. We will exchange such copies if returned to us, and will pay postage.

The Bromide Nuisance Once More.

THE following report of our attorney, Mr. Howson, will show that the advocates of the Bromide Patent have been again at work; it will also show that their proceedings are eagerly watched, and that a *third* attempt to resuscitate this dead patent has again been signally defeated in the Senate of the United States:

PHILADELPHIA, Feb. 13, 1871.

EDWARD L. WILSON, Esq.,

Sec'y National Photographic Association.

DEAR SIR: In the matter of the Cutting Bromide Patent you are aware that a petition for a rehearing was advocated by Z. C. Robbins, before the Senate Committee on Patents, in May last, and resisted by me on behalf of your Association.

An adverse report was rendered by the committee on the 19th of May, 1870, since which time it has been known that the said Robbins would make another attempt to have the petition reconsidered by the Senate Committee. I accordingly instituted proper inquiries, and found that an additional paper had been filed December 9th, 1870, by the said Robbins. A few extracts from this document will demonstrate its extraordinary character. In the first place this advocate for the patent says:

"The counsel for the petitioner beg leave most respectfully to represent to your honorable body, that the report of your honorable Committee on Patents was made under misapprehension of the prayer of the petitioner, and without any reference to the testimony adduced in support of the said prayer."

Then follows some not very edifying abuse of the Acting Commissioner of Patents, of the Examiner in charge, and of the writer your counsel, the paper concluding as follows:

"Therefore, in view of the oversights and errors in the aforesaid report of the honorable Committee on Patents, in the matter of the petition of the administrator of James A. Cutting, deceased, the counsel of the petitioner respectfully pray that the action of the Senate upon the said report may be reconsidered, and that the petitioner may have an opportunity of being heard before

said committee on those portions of the testimony heretofore referred to, and that all the papers relating to the files may be withdrawn from the files, and again referred to the committee.

"And, as in duty bound, &c.,

(Signed) "Z. C. ROBBINS."

As no new testimony was offered in connection with this additional paper, and as the latter contained no new points to be combated, but was simply an insulting criticism of the prior action of the Senate Committee, it would have been an act of supererogation on my part to appear on behalf of your Association before that committee, by whom the following report was rendered.

Very truly yours,

H. HOWSON.

"The Committee on Patents and the Patent Office, to whom was referred the petition of Asa O. Butman, administrator, for renewal of letters patent to James A. Cutting, for an improvement in composition for making photographic pictures, having considered the same, beg leave to submit the following report:

"This case was before the committee for hearing during the last session of Congress, and after careful consideration was reported back to the Senate with an adverse report. That report was made on the 19th of May, 1870, and fully set forth the grounds of the petitioner's application for relief, and also the evidence filed with the petition.

"At the present session of Congress a memorial was presented asking to have the case recommitted for a hearing before the committee. No additional evidence was adduced at this second hearing; and after carefully examining again all the facts before them, the committee could see no reason whatever to modify or change their former conclusion.

"They, therefore, report back the petition, and ask to be discharged from the further consideration thereof."

We think that this thrice scotched patent is now actually dead.

OUR PICTURE.

OUR picture this month is another one of the prize series, and as we stated last month, was the greatest rival among the competing pictures to Mr. Browne's "Departed Power," which appeared in our last number, and for which the medal was awarded. It is but fair to Mr. Zimmerman, who made our present picture, to state that the judges hesitated considerably in making their decision, and were it possible to give *two* medals, would certainly have awarded one to Mr. Zimmerman for this picture also. This being the case, and as Mr. Zimmerman made *three* sets of negatives and *tried* harder apparently to win the prize than any one else, we presented him with a *duplicate* medal for his excellent work.

While Mr. Browne's picture is all that has been said of it, and a most picturesque and beautiful thing, it is very different from Mr. Zimmerman's, and our readers will readily see how hard it was for the judges to decide which of the two should secure the award. Mr. Zimmerman's possesses more of the true elements of a landscape than Mr. Browne's, for here are trap-rock, both in shadow and in sunlight; evergreens, foliage, water, sky, foreground, middle-ground, and distance; and, as a contrast to these, the beautiful bridge, all in harmony with each other, and showing excellent skill and work. Mr. Browne's picture, at the same time, is full of charming qualities as a picture, shows the manipulation of a master photographer, and is as different from the other as two out-door pictures could possibly be.

Both competitors justly bear their honors, and we congratulate them on their excellent success. We hope landscape artists of such talent will rapidly multiply, though they are scarce now.

Mr. Zimmerman has sent us a sketch concerning his picture, which we append. We also call attention to another article on Landscape Photography, which we have extracted, as being appropriate and seasonable.*

* We intended to republish the article on Landscape Photography, on page 24 *Year-Book of Photography*, by Mr. Bedford, but the crowd upon our columns will not permit.

"Presuming that the reader, weary of the restraints of a city, would enjoy a short photographic tour, I invite him to step on board the little steamer 'Nellie Kent,' which lies at our levee at St. Paul, steam up and impatient to be off. A single tap of the bell, the gang-planks are drawn in, and the odd-looking wheel at the stern of the boat begins to revolve. We slowly swing out into the current and head down stream. A wave or two of the handkerchief, a lingering glance at our fine young city, so charmingly situated, and the bend of the river hides it from view.

"Our destination is the 'Dalles of the St. Croix.' As a definition of the word 'dalles,' in an old dictionary we find 'a water passage through rock.' Prof. Eames, the geologist, tells us that the 'Dalles consist principally of an outburst of *trap*, which appears to have passed through open fissures, breaking down the continuity of strata without tilting them into inclined planes, and abuts immediately against the *lingular* beds of the *lower protozoic sandstone*, and broken fragments of these fossiliferous layers are entangled in crevices and joints of the upheaved mass.'

"We are obliged to the learned professor for the lucid explanation, but are quite willing to see for ourselves. To be brief, we will not describe our thirty-mile ride down the majestic Mississippi, the Father of Waters, nor the eighty miles up the romantic St. Croix, a miniature Mississippi. 'Tis evening when we near the dalles, and deploring the ill luck that deprives us of daylight at such a time, we crowd forward to the hurricane-deck and join a group of tourists and pleasure-seekers, among whom the portly form of Captain Kent looms up conspicuously if not gracefully.

"Complete darkness has now settled upon us, and we strain our eyes in the vain effort to pierce the gloom and wonder how the pilot keeps the channel. The sable crew are gathered on the deck immediately beneath us, only visible now and then in a lurid glare, when the furnace doors are thrown open for a moment by the active fireman. Gloomy rocks, ten times higher than the smoke stacks of our little 'Nellie,' tower on all sides, with irregular outlines,

barely visible against the sky. After ordering the pilot to 'go slow,' the captain leans over the low rail and calls to the deck-hands below to 'give us a song!' A tall darkey jumps upon the capstan, and with his hand to his mouth gives vent to a shrill preparatory note; it has scarcely left his lips when the echo gives it back, clear and almost startling, again and again, gradually growing fainter; then, as it is about to die away entirely, it is taken up by the whole crew, who unite in a weird negro melody, more novel and boisterous than musical. At the same instant large torches on each side of the boat are lighted, bathing in a red light the perpendicular walls of the gorge through which we are passing, the broad light and deep mysterious shadows of the seamed and moss-covered rocks lending a charming effect to the scene which no pen can describe. Higher and higher the walls appear to rise, and seem almost to form an arch above us, while the noise of the escaping steam drowns out every other sound until, as we approach our destination, the pilot blows the piercing whistle; we clap our hands over our ears to shut out the din, but the vibration of the air and of the thin deck on which we stand makes us still sensible of it.

"A sharp turn in the gorge, and the pilot is compelled to run the bow against the wall of rock; we touch gently, the fierce current swings the stern around and we again head up stream. Only five hundred yards more, but here the current is like a mill-race. More steam! We get it, and the 'Nellie,' quivering from stem to stern, bravely gains the landing. A plank is shoved out, from which a nimble darkey springs on shore, rope in hand; he makes it fast, and we are at our journey's end.

"After a refreshing sleep at the principal tavern of Taylor's Falls, Minnesota, a romantic bustling village, the head of steam-boat navigation on the St. Croix, we are out bright and early to enjoy, for the first time, the varied scenery of the Dalles. It is a glorious Indian summer day, with not a trace of that dreamy haze, the delight of the poet and painter, but the dread of the photographer; light, fleecy clouds float lazily along the sky, and there is little or

no wind. Tall, graceful pines meet our eyes in every direction, their dark quiet green appropriately relieved by livelier masses of birch and poplar; and oaks and maples in their autumnal dress furnish a combination of warm tints, heightened by contrast with the cool gray of the rocks.

"Although the Dalles proper only extend for a few miles along the river, we find a multitude of subjects for the camera and sketchbook; charming little bits, and no lack of extensive panoramas of great beauty. We find and picture the curious pot-holes, or natural wells, which abound here, and seem to have been made by loose rock under the action of circular currents of water. Some are apparently bottomless, while others are partly filled by debris, in which trees have taken root. Shameful to relate, these picturesque rocks are defaced by flaming advertisements of the quack nostrums of the day! Oh for a law to punish such offences!

"To write their names in conspicuous places seems to be a ruling passion with some travellers, and they have not spared the rocks here. But I must hasten to a close. We clamber over windfalls, jump over chasms, slide down trees into the pot-holes, slip, stumble, fall, tear clothes, damage boots, and discover the bottom of our shallow (?) lunch basket long before noon; but, best of all, are *repaid* for the hard labor by our success, and as a view in the Dalles will give the reader a better idea of the character of the scenery than a lengthy description, I call his attention to 'Our Picture,' which is one of the results of that day's work.

"I used a 5 x 8 Wilson or Philadelphia Stereo Camera, American Optical Company's manufacture, and a Scovill's Achromatic Meniscus Stereo Lens; focal length, 9 inches; size of stop, $\frac{3}{8}$ inch; length of exposure, 45 seconds; time of day, 4 P.M. The portable dark-room a modification of the Carbutt box; size, when open, 20 x 20 x 20 inches; containing for a day's work a 5 x 8 rubber bath solution and dipper, an 8-ounce bottle collodion, 4-ounce vial conc. developer, 2-ounce vial of glycerine solution, a flat tin can for water, a camel's-hair duster and small towel, finally a wide-mouthed bottle for developing. The tripod, top and legs,

are strapped on the top of the dark-box, and the whole slung as a knapsack. In the left hand are carried the camera and plate-box, about which two articles the ample focusing cloth is strapped, leaving the right hand free to assist in climbing, &c."

COLLODION.

No. 1, two months old.

Ether,	4 ounces.
Alcohol,	4 "
Anthony's Negative Cotton,	56 grains.
Iodide of Ammonium,	40 "
Bromide of Cadmium,	20 "

No. 2, twelve months old.

Ether,	4 ounces.
Alcohol,	4 "
Anthony's Negative Cotton,	32 grains.
Iodide of Cadmium,	48 "
Bromide "	24 "

COLLODION used in making negatives: equal parts Nos. 1 and 2. BATH: an old but good bath (neutral), 40 grains strong, 20 ounces; ice water, 20 ounces; Tesch's nitrate silver, 800 grains, well sunned and slightly acidified with C. P. nitric acid.

DEVELOPER (*stock*).

Double Sulphate of Iron	
and Ammonia,	2 ounces.
Water,	10 "
Acetic Acid (No. 8),	4 "

For use.

Stock Developer,	1 ounce.
Water,	2 ounces.

PLATES were albumenized after cleaning with potash and nitric acid. After developing, rinsed with a little water and flowed with glycerine one part, water one part, to be *fixed* (not strengthened) at leisure.

The prints were made by Mr. William H. Rhoads, No. 1800 Frankford Avenue, Philadelphia, on Mr. John R. Clemons's renowned Philadelphia albumen paper. Mr. Clemons is one of our most persevering and conscientious manufacturers of paper, and his production rivals any other paper in the market, as the excellence of these prints testifies. He is meeting the success a good article always brings.

We now hope these two excellent outdoor pictures will be compared carefully, studied, and teach good lessons.

Editor's Table.

THE *Photographic World* for March contains a reduced photograph of twenty-five pictures of one subject, illustrating Position and Composition, and the following articles: Photography Abroad, On the Influence of Individuality in Portrait Photography, Reminiscences of a Summer Jaunt, Third Annual Exhibition of the National Photographic Association, On Taking the Baby, Notes In and Out of the Studio, Photography for Boys, German Photographic Society of New York, Proceedings of the Hypo Club, The Magic of Modern Science, Position and Composition, Permanganate of Silver, Poser and Posing, On the Splitting of Varnished Films, its Cause and Prevention, Splashes of Silver, Our Profession, Short Photographic Sermons, Enlarging by Artificial Light, Contrivance for Grating the Background, Still Another Still, Our Picture, All the World Over, Editor's Table.

BEAUTIFUL CHROMOS.—Messrs. Colton, Zahm & Roberts, No. 172 William Street, New York, have sent us two of the most exquisite and beautifully executed chromos we have ever seen. One of them, "The Easter Cross," is grand. Subject, an old stone cross, with lingering vines and flowers

trailing gracefully about it in beautiful arrangement. The other is entitled "Flower Piece," a gorgeous bouquet of tuberose, lilies, morning glories, and so on, most naturally colored. They are both exquisite. Send for a catalogue.

MESSRS. B. FRENCH & Co., Boston, the well-known sole importers of the Voigtlander and Darlot lenses, desire us to say that now Paris is opened, they will shortly have a full supply of the Darlot lenses, and be able to fill all orders promptly. M. Darlot has written several letters to Mr. French recently, detailing the experience of an optician under a siege gun.

CORRECTION.—Mr. Jno. C. Browne desires us to say that his formulæ were given on page 60, vol. iv, *Philadelphia Photographer*, and not vol. vi, as stated in our last number.

MESSRS. A. M. COLLINS, SON & Co. have favored us with some very neat designs for photographic mounts, cabinet and other sizes, which they have introduced in their efforts to meet the demands made by Mr. W. J. Baker in his excellent article in our February number. They are very tasteful, and ought to help sell pictures.

MR. H. L. BINGHAM, Kalamazoo, Michigan, has sent us some admirable photographs. We have seen no one who seems to have been so much benefited by his "Week at the Cleveland Exhibition" as Mr. Bingham. His work has improved ever since.

MR. R. BENECKE, St. Louis, Missouri, has made some very fine negatives of the scene of the late terrible tornado in East St. Louis. They show some of the most confused masses of timber, trees, buildings, broken cars, axles, wheels, &c., that we have ever seen. They were made eighteen hours after the "blow." Mr. Benecke says winds are always hated by photographers, and he believes no one loves it in this "concentrated form."

VIEWS ON MOUNT WASHINGTON.—MESSRS. Clough & Kimball, Concord, New Hampshire, have sent us a series of the views they made during their stay on Mount Washington this past winter. As Mr. Clough described his ascent in our March number, and we ours in this issue, our readers can get a tolerable idea of what class of pictures are to be obtained there. He and Mr. Kimball have done full justice to the scene, and have given us some magnificent views of frostwork, and of the buildings on the summit coated with the frost. They are specially prized by us, but very interesting to any one. The Lizzie Bourne Monument, the Tip-Top and Summit Houses, the building in which the scientific party are quartered—all are done full justice. The views are sold at \$3 a dozen, and are well worth it.

"STEREOSCOPIC TREASURES."—This is the title given to a series of "subject" pictures before us, the work of Mr. F. G. Weller, Littleton, New Hampshire. Among the best are "Sleeping I dreamed Love," "Meeting by Moonlight," "Grandmother's Likeness," and the "Artist's Dream." Mr. Weller certainly deserves credit for his pluck in attempting this class of work, and is on the right track not only to success but to pecuniary reward for this class of pictures *will sell*, when properly made, and we therefore wish success to all who undertake it.

"THE PALETTE," an artists' association in New York, composed of "artists and friends of art," held its second annual festival in Allemania Hall, Monday, February 27th. It was a grand affair made up by a comedy, "The Ladder of Fame" (showing the ups and downs in the life of an American artist), tableaux, suppers, music, dancing, and a feast of beautiful pictures, many photographs included. It was a bright and

successful affair. Messrs. Kurtz and Anderson were prominent among the members there.

ITEMS OF NEWS.—MR. E. H. ALLEY, Toledo, Ohio, has recently occupied his new gallery on Superior Street, and says *it* is superior. Mr. J. C. Toler, Oxford, Ohio, was burned out February 22d, and suffered severe loss. The Chicago Photographic Association (new) have sent us a copy of their constitution, and it looks as if good men were upholding it. Messrs. R. Newell & Co. have opened a very fine establishment at No. 626 Arch Street, Philadelphia, which is devoted to the business of landscape photography,—the only one of the kind in Philadelphia, and we wish it success.

RECEIVED.—Samples of card-work from Mr. J. Merrill and Mr. F. M. Spencer; from Mr. E. F. Lummis a photograph of his new rooms and of his lady; from Mr. J. W. H. Campion, Barbadoes, cartes of West Indians; from Mr. Jno. MacIntosh, Rochester, New York, photographs from his spirited illustrations of Tam O'Shanter; from Mr. F. L. Le Roy some admirable cartes of various subjects, showing cleanliness, care, and skill in their production: Mr. L. is improving rapidly and nicely; from Mr. C. E. Smith we have some of the nicest cartes we have lately seen. He is evidently a tasteful poser, and his negatives are rich, round, and full of excellence. Moreover, they are well printed.

TO CORRESPONDENTS.

E. K. ABRAMS.—Wendell Phillips is far behind in his assertion that photographs were made in 1600. Let him read the Bible and he will therein find both "sun images" and "pictures of silver" mentioned. What *were* they?

PROF. CHAS. A. SEELY, 36 Pine Street, New York, will please accept thanks for a copy of his excellent article "On Ammonium and the Solubility of Metals without Chemical Action."

SUBSCRIBER, BOSTON.—Some of the photographs you send are tolerably good. If there is any *general* fault in the negatives it is in the exposure—some being over and some under-exposed. We like soft negatives, but we like to see time enough given to get it. As the best chemical effects we should select the two of the candy girl, and the two of the little fair-haired girl. One of the lace veils is a fine piece of work, too, and the other a failure. We seldom see such a *variable* lot of pictures in so small a quantity. Learn!

NOTES IN AND OUT OF THE STUDIO unfortunately reached us too late. See April *World*.



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T H E

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PROCEEDINGS

OF THE

Executive Committee of the National Photographic Association.

THE Executive Committee of the National Photographic Association met at No. 822 Arch Street, Philadelphia, Monday, April 10th, for the purpose of making arrangements for the forthcoming Exhibition, and for the transaction of other business.

The Chairman, Mr. W. Irving Adams, presided, and Messrs. Bogardus, Carbutt, Wilcox, and Wilson were present.

The minutes of the last meeting were read and approved, and the Secretary ordered to enter the Protest of the Committee filed in the Patent Office against the extension of Woodward's Solar Camera patent, on the minutes.

The Secretary reported that, agreeably to the instructions of the Committee, he had employed Messrs. Howson & Son to attend to the interests of the photographers at the hearing in the matter of the Solar Camera extension case, and to see that the cause of the fraternity in general was regarded.

The leases of the Academy of Music and of Horticultural Hall, for the purposes of the Association in June, were presented from the Local Secretary, Mr. Wm. H.

Rhoads, and his action in the matter, together with the leases, were approved.

Mr. Wilcox moved, and it was resolved, that the Treasurer notify all members in arrears for dues, to remit the same at once, as the treasury was in need of the funds to carry on the Exhibition; the Treasurer also to make his report to the Committee at the next session.

The Chairman suggested that all matters and motions that were to come up before the Association at the annual meeting, that would entail an appropriation of money, first be presented to this Committee before action was taken on them.

The Secretary was authorized to invite some of the leading photographers of the country to read papers on photography at the annual gathering.

At this stage of the proceedings the Committee visited Horticultural Hall and the Academy of Music to inspect them.

The different apartments were examined fully, and arrangements for the hanging of pictures and display of other articles were suggested to the Secretaries.

After the visit to these places they assembled again at the place of meeting.

On motion, it was resolved that the action of the Local and Permanent Secretaries in the matter of the Exhibition, so far as the arrangements have been made, be approved by the Committee. Moreover,

the Secretaries were delegated to make such rules for exhibitors as the circumstances dictated to them,* and to publish them in all the photographic journals.

The Permanent Secretary was authorized to engage the services of a phonographic reporter for the meetings of the Association.

On motion, adjourned to meet at the call of the Chairman.

EDWARD L. WILSON.

Permanent Secretary.

HOW TO PAINT PHOTOGRAPHS.

A THIRD THOUSAND DEMANDED.

"*How to Paint Photographs is all sold,*" is the answer we are constantly compelled to make to our orders for it. The Second Edition rattled off rather more rapidly than we expected, and although we *bought back* all we could get, still the supply wouldn't last until we could get more ready, and now we are entirely out.

In our dilemma we appealed to Mr. Ayres, and we append his answer. We urged him specially to add full instructions in *Oil* coloring, and he has consented to do so, so that the coming edition will embrace *everything* that a photograph colorist needs to instruct him in that remunerative branch of his art.

ABSTRACT FROM NOTE FROM THE AUTHOR.

..... "I am pleased to learn from you that a demand has already been made for the *Third* Edition of 'How to Paint Photographs.' I am busy at it, and hope to be able to send it all before long. My aim, as you are aware, has always been not to offer to the fraternity a mere reprint of a former edition, but to revise and thoroughly renew the whole; adding *all* that I can of my own practical discoveries, and the knowledge which I can obtain from others, in order to lay in the student's pathway every possible help to success. I intend to epitomize what is thus far known on the subject of *Retouching the Negative*, and (in conformity to many desires) add a supplementary chapter on painting photo-

graphs in *oil* colors. In response to the complimentary reception, which my little work has had thus far, it is my pleasure and my ambition to render it *worthy* of its success."

A SUGGESTION FOR MOUNTING GLASS POSITIVES.

BY JOHN C. BROWNE.

In my experience, the greatest obstacle in preparing slides for the magic lantern is not the chemical manipulation required, but the mounting or preservation of the picture from injury occasioned by dust or scratching. The neatest form of mounting is that adopted by Mr. Langenheim, of Philadelphia, in which the positive and glass cover are cut circular, and inserted into a wooden frame of a size to fit any lantern of usual dimensions; but the risk of breaking the glass, and the time required in cutting the circles, is a serious matter to the uninitiated, and, taking the frames into consideration, somewhat expensive. The more general method of mounting slides is to cut the positive and glass cover $3\frac{1}{4}$ inches square, fastening the edges together with thin strips of black muslin, paper, &c., using a paste composed of flour, or what is known as bookbinders' paste; the latter is the best. Slides pasted with gum-arabic are not reliable, as the paper or muslin will crack off by heat and constant use, rendering the picture liable to injury. But this plan of joining the two glasses together by pasting is troublesome, and requires considerable time.

The method that I propose is to use a metal frame somewhat similar to a ferrotype preserver, but of heavier metal, finished plain, without any of the embossed or raised work that such frames have on the front side. The edges for turning over and protecting the two glasses need not be made wide enough to interfere with the picture when thrown upon the screen. Some months ago I wrote to a manufacturer of ferrotype preservers, asking him to stamp for me a few $\frac{1}{4}$ size frames in heavier metal, and stated that it was desirable to make the embossed work as smooth as possible. The result answered my expectations perfectly

* For instructions to exhibitors, railroad arrangements, &c., see further on in this number, and circular which will follow about May 10th.

as regards the frames being strong enough to preserve the picture, but the size was not desirable, also, the embossed work (although lightly stamped) prevented the picture sliding smoothly. As a suggestion, I propose that frames be made $3\frac{1}{2}$ inches square, and stamped in a plain die. Pictures can be rapidly mounted by the use of this frame, and the labor of pasting entirely avoided. When exhibiting pictures, a wooden frame can be used, having a square cut in the centre, which will bring each picture into the exact position desired on the screen, and will require but little change of focus.

ON DEVELOPMENT.

BY M. CAREY LEA.

ONE of the last things that is acquired in the practice of photography is a knowledge of the exact relations which are required to subsist between Exposure and Development. Some never attain it; and even the most skilful often miss it. Perhaps the following remarks may prove of use to some at least of those who do not always succeed to their own satisfaction.

The badly lighted portions of a landscape indispensably require a certain prolongation of exposure, otherwise they cannot appear with proper detail in the development. The same is true in portraiture; but I shall direct these observations especially to landscape work, because the difficulty is there the greatest. In portraiture, the light can be varied and modified by the blinds, but in landscape work we must take the light as we find it.

If now other portions of the same subject are strongly illuminated, we are obliged to over-expose these. Of the two difficulties, of over-exposing the high lights or under-exposing the shadows, it is, of course, always preferable to fall into the former, since it is possible to a considerable extent to remedy the evils incident to that course, whilst an under-exposure of the shadows is fatal.

The first precaution in these cases of great contrast is, of course, the use of a collodion containing a considerable amount of bromide. Having then used such a collodion, and having given a long exposure, let us

consider the effects produced by a short and a long development respectively, with an iron developer of ordinary strength, say from fifteen to twenty-five or thirty grains of protosulphate to the ounce.

In consequence of the long exposure, the first application of the developer causes the image to flash out at once. If we at once cut this development short and fix the plate, we get a clean, bright negative, which might, indeed, be suitable for making enlargements, but which, when printed in the ordinary way upon albumenized paper, yields a dark print, soft indeed, but entirely wanting in force and character.

If, on the other hand, the developer be kept on the plate, the image rapidly gains in density. If after thus prolonging the action we fix the plate, we have a negative that yields flat, light prints, as bad as, or worse than, the former.

Vary the action as we may, we always pass from one of these faults into the other. The prints are unpleasing; the objects are not properly spaced out, but seem huddled together; the light and shade are unpleasing; the effect is tame and characterless by reason of *want of contrast*.

If now a tyro, finding this difficulty pressing upon him, consults authorities, he finds it always laid down that want of contrast proceeds from over-exposure. This is certainly true, but in a case like the present, the information does not help him, but the contrary. For if he tries the effect of reducing the exposure, he obtains plenty of vigor, it is true, but falls into a new set of difficulties. If he gives a short development, his shadows are black and wanting in detail; if he prolongs it, the high lights become hard and blocky. One or other of these faults is certainly present, and in bad cases, both.

The remedy for these evils lies in regulating the developer. In cases like those which we have been considering, where a collodion with much bromide (that is, $2\frac{1}{2}$ to $3\frac{1}{2}$ grains to the ounce of collodion) has been used, and where the exposure has been prolonged, the sulphate of iron in the developer may be reduced to 10, or even 5 grains, to the ounce.

This reduction, however, is not to be pro-

duced by simply adding water to the ordinary solution, because the acetic acid is not to be reduced in the same proportion, or indeed at all. But the five-grain solution is to have as much acetic acid to the ounce as the operator is in the habit of using with his ordinary developer.

Under such treatment the development becomes slower, and the high lights have time to receive a sufficient deposit of silver to produce the contrast necessary to give tone and force to the print.

The ideas involved in this explanation are very simple, and are known familiarly to very many experienced photographers. To many, however, they are not. The tendency at the present day is to give long exposures; formerly it was the other way, and one would hear the boast that such a negative was taken in so many seconds' exposure, as if that indicated anything. As time goes on, it became better and better understood that the object is to get the best possible result, not the best merely with any given means, but the best with any means that the photographer has the skill and talent to bring to his aid.

Generally speaking, the best negatives are not those that flash up under the developer, but those that come out, quietly and regularly, neither springing out, nor, on the other hand, requiring much time and waiting.

A WELCOME

To the Photographic World.

BY H. D. W. MOULTON.

YOUR charming novelty, the infant *World* is before me. I have well and faithfully digested its contents, and cheerfully echo the praise awarded the enterprise and merit exhibited in its clearly-written and cleanly-printed pages.

What if (as you say) it has a "*preliminary look*." Do not all "*infants*" have a preliminary look? And are they not all ushered in, with *impressment*, if not downright timidity? And yet criticism must close her ungainly jaws at the energy shown in the generation of this "*infanta terribile*." (*Vide Bell at Cleveland.*) And should any one doubt your ability to bring into the

world such nurslings, aye, and maintain them too, let him look at the stalwart form of the *Philadelphia Photographer*, that giant, born under a deeper clouding of our photographic existence than all his successors, and on whose sturdy arm we have learned to lean in our hour of peril. But I forbear, for I do not intend to write anything that *could* be construed into fulsome praise. Yet "murder will out," and I only welcome as I feel, the *World* and its lively budget, a *supplement* not *substitute* (which would be rank heresy) of our glorious *Photographer*.

Your articles "Photography for Boys" strike a sympathetic chord of my memory, sending me back to my childhood hours, when, under the administration of a more than indulgent "pater familias," I was permitted to *odorize*, *fog*, or possibly *blow up*, that far-off room of the old mansion, in my boyish endeavors to produce the "image divine," à la *Daguerre*, or later, *Wedgewood* or *Talbot*.

Oh! how I gloried (regardless of maternal frowns) in my bespattered linen and Ethiopian skin, if by chance I caught *one* ray and "enslaved it," as Professor Towler would say; or mastered *one* refractory image, to stand as a way-mark in my after pilgrimage. With what swelling pride I exhibited my first creditable effort to the evening library conclave, receiving as the meed of my exegesis the sisterly kiss, the brotherly enthusiasm toned down with maternal benignity; and with what sensitive curl of the lip I heard the edict of the "Governor," "that no picture, on such a bibulous surface as paper could ever rival the matchless *Daguerreotype*;" and, perhaps, with what inward profanity I vowed that even *he* should yet admit the reality of the glorious visions that floated like an Elysian landscape before me.

But, alas, those were halcyon days, and I now confess to feeling a sensation of old fogysm stealing over me as I recall those boyish hours of intellectual and chemical strife, remembering how dark,—yes, almost dreary,—the old photographic field looked at times, lit only by the potassium (iodide) lamp, kept in trim with wick "Gallic;" but the irresistible spell kept me chain-bound, as I predict it will thousands of

other youths, who, under the promptings of the *World*, will enter the *now* better explored realms of Chiaroscuro. It requires no imaginative stretch, as my eye runs along the vista of coming years, to see the merry madcap group of the drawing-room, the staid library scene, or the duplicated treasures of the conservatory, laid before the evening visitor by the blue-eyed "special artist" of the home circle, executed with an *expression* and *éclat* that can never enter the studio of the professional.

Now, to your endeavor to give the little ones an incentive to emulate the *savans* in our beautiful art I bid you God speed, and may the day not be far distant when our embryo photographers are found among the fireside groups of "Young America!"

A word also about your article to "Young Photographers," and I give place to the more weighty or practical effusions of my neighbors.

How sound the precepts given therein, and yet it almost makes one in rebellion summon the shades (advisedly) of our Gurneys, our Silsbees, our Whipples, our Fontaynes, our Fitzgibbons, and a host of leading spirits who laid the foundation of the noble structure, that *these* are so gracefully fitting with the keystone; nevertheless, without one spark of egotism, after overhauling my *repertoire* of old bygoness, I sigh for the good old days when we were wont to struggle for "*effects*" requiring no artifice or fairy touch, no piling up of *Ossa on Pelion* to make our productions a printing success; "*effects*" hidden in the darkened repositories of those same old master-minds that, perhaps, it were well to critically examine ere consigning to oblivion.

Yet I can appreciate, in my quiet valley, far away from the arena of active strife, the experimental force inculcated by the article in question; and if, while never for a moment putting off the good old armor I do not fight as before publicly, yet I am more than deeply interested in progress in any form, and in future (with your indulgence) I will point out some of the rocks of "*Scylla*," upon which many a tyro has been wrecked, if thereby I humbly add to the efficiency of our great corps in the army of art.

Meanwhile, wishing you that greatest boon, success, I court the drowsy god.

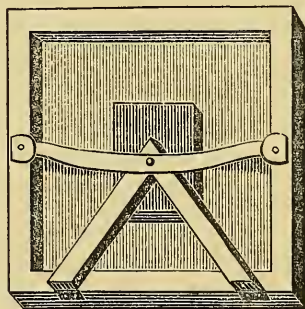
SPENCER, N. Y., Feb. 4, 1871.

PHOTOGRAPHY ON WOOD.

BY CHARLES HOMAN.

I SEND you a formula for printing on wood, which is very simple, and the results are much finer than anything that I have tried. The process may be old, but I have never seen it published. It is new with me, and thinking it may be of use to some of your readers, I send it to you.

I. *Salted Albumen*. — Beat the white of one egg with an equal amount of water, making about 2 oz.; add 10 grains of chloride of ammonium and filter. Moisten the block with water; whiten it with flake white, rubbed up with water, or the enamel from a card will do; brush it smooth as it dries; when dry flow on the salted albumen; spread it over the block with a piece of glass, drain and dry; make a little wall around the block with a roll of wax. Now pour on the silver solution, and spread with a glass (silver the same as for paper), drain, dry, and fume it; after which it will be ready for printing. Print the same as a porcelain; tone with weak gold; fix with hypo.



I use a home-made printing-frame; I find it very handy for porcelain printing and many other things. I take an ordinary 8x10 frame and fasten a glass at the bottom. I fasten the glass in the printing-frame with two little wedges of wood at the end of the glass. They hold it very firm, and are easily taken out when you wish to use the frame for other kinds of printing.

On the top I fix a triangular-shaped piece of wood with hinges, making the point come at the middle of the frame, screwing a strip of brass across the joint for a spring. I fasten the block underneath with wax, so it can be taken off. When you wish to print a block of wood, stick the negative on the plain glass with wax at the corners. For printing on wood it is often necessary to use a reversed negative, which I get by first making a ferrotype, and whiten it with mercury; then make a negative from it.

NEW HAVEN, CONN.

CONVENIENT DRY PROCESS.

BY PROF. J. TOWLER, M.D.

THE following dry process is one which I have used during the past summer for taking views at no great distance from any resting-place I might select for residence, and then walking or riding out with camera and changing box for a mere excursion; it works well.

The plates are first well washed and coated with a thin film of albumen (one ounce of albumen to ten or twelve ounces of water and one drachm of ammonia).

When dry, the plates are coated with collodion, and sensitized in the usual way until the film has assumed a creamy appearance. It is always better to prepare the dry plates in the evening by candle-light, and then place them in the drying cupboard, so as to be ready by the next morning for the excursion. As soon as each plate is properly sensitized, it is placed, film downwards, in a large wash-basin full of rain-water, until the next plate is ready. It is then taken out and washed *thoroughly* at the tap with rain water, and floated with the following preservative:

THE PRESERVATIVE SOLUTION.

Albumen,	4 drachms.
Water,	5½ ounces.
Gum Arabic, . . .	15 grains.
Acetate of Morphia, .	5 grains.
Acetic Acid, . . .	2 drachms.

Mix these ingredients intimately together, and keep in stock for use. Previous to application filter the amount required.

Each plate is flowed or coated with just enough of this solution so as to cover it thoroughly. The solution is flowed backwards and forwards over the plate for about a minute, and then the excess is allowed to drain off, after which the plate is put away in the drying cupboard or box to dry.

EXPOSURE.

Expose the plate three or four times longer than you would an ordinary wet plate, sometimes even longer than this. It is well to dry one of each batch before you start off on the excursion, in order to be able to form some judgment as to the exact exposure that will be about right.

DEVELOPMENT.

First moisten the plate in a dish of rain water; afterwards flow over it a drachm or two of the ordinary nitro-gelatine developer. This developer is then returned to a small beaker glass, and about two drops of nitrate of silver solution are added, and intimately mixed with it. This is the developer proper, which is again poured upon the plate. The picture now soon appears, and may be strengthened to any amount by adding more silver solution. There is no fogging in the picture thus produced, and the detail is all that can be desired.

I do not know how long such plates will keep, and I must confess that the keeping property is of minor importance to me, from the fact that I have ceased to run any risk with dry plates by using them except on the day after their preparation at the longest. In this way there is a possibility of getting good, even superior work, with considerable convenience and certainty.

CHEMICALLY PURE CARD-BOARD.

MR. EDWARD L. WILSON.

DEAR SIR: We propose in the following article to reply to a question that has of late been frequently asked of us, and through your Journal to give it as wide a circulation as possible. The inquiry is as follows: "Do your cards contain hyposulphite of soda?" We answer *NO*. Aware of the damaging effect to a photographic print,

the presence of this chemical in the card possesses, we have, at much cost and at great pains, been able to obtain our materials (we refer to the outside surface) from a source where we are assured and confidently believe, and have had it tested and proved, that all trace of this chemical is "washed" out, and though often tempted by a concession in price to obtain our supplies from other sources, we have rigidly resisted the temptation, and have a just pride and satisfaction in knowing that the photographic cards that go out from our works are as *chemically pure and free from anything injurious to a photographic print as can possibly be made.*

The manufacture of the best card stock for photographic purposes has been our care and study for years, and we recognize the fact that our efforts have been appreciated by the trade throughout the United States.

In new styles and designs and varieties of mounting cards, we strive to increase the attractiveness of our stock, never, however, losing sight for one moment of the important consideration to have our cards chemically pure. Yours truly,

A. M. COLLINS, SON & Co.

PHILADELPHIA, April 18th, 1871.

We are glad to give place to the above, and to indorse the statements there made fully.

At the last meeting of the *Hypo Club*, reported in the April number of the *World*, this very subject was brought up for discussion, and a high testimonial given to Messrs. Collins' card-board. Moreover, as the discussion there held and the paper by Mr. Bovey read there prove, many more things than card-board cause the fading of prints. It will do those good whose prints fade and turn color to read the April *World*. —Ed.



GOSSIP.

SOUTH NORWALK, CONN.,

April 17th, 1871.

FRIEND WILSON: Having paid you and your city my annual visit during Easter week, I must say, that of all places for a photographer to spend a week profitably and pleasantly commend me to, Philadelphia, and to my brother artists who may chance to read this let me say, don't fail to call, if within a hundred miles, for this is truly a city of Brotherly Photographic Love.

Those it was my good fortune to meet, took me through all their rooms, explained their manner of working in the light and in the dark-chamber, giving me many valuable ideas and suggestions, as well as some beautiful pictures, that I shall hang up with their names attached. Truly, a photographic millennium has dawned upon us. This, oh! National Association, is your work, aided by the home association in Philadelphia. We are reaping the golden fruits, and we hope in June next to cry harvest home, and take by the hand, not only Fennemore, Cremer, Germon, Carbutt, Bell, Schreiber Bros., Evans, Langenheim, Trask, Gibon, Gutekunst, and Rhoads, but all others in Philadelphia and thousands throughout our country who may be gathered at the Convention.

Another pleasant surprise was an invitation to attend the meeting of the Pennsylvania Photographic Association, which happened on the evening of the day that the Executive Committee of the National Photographic Association were in session; they were present and President Bogardus and others addressed the Society, after which Mr. Bell showed some very fine effects produced by Browne's (ammonio-sulphate) developer. Mr. Bell is one of the workers in Philadelphia. Mr. Trask spoke on the subject of taking pupils, also of benefits

Now warm weather is approaching photographers should remember to change the treatment and the strength of their chemicals. For full instructions, see in *Dr. Vogel's Handbook*, now ready, the chapters on the Care of the Bath, the Care of the Collodion, and so on. Price \$3.50.

that might be derived from having a photographic academy. Mr. Bell exhibited some fine lantern views through Marcy's economical and convenient sciopticon.

But I must close, with many thanks to you, Mr. Editor, and to your brother, and to my brother artists in Philadelphia, hoping to meet you in June. Until then adieu.

E. T. WHITNEY.

LANTERN SLIDES WANTED.

Those who are interested in the success of the Exhibition will take notice that one of the great features of the week will be a grand lantern and stereopticon exhibition under the supervision of Prof Morton and Mr J. W. Black. All photographers who have good landscape and figure negatives will contribute to the enjoyment of the occasion by making slides therefrom for use there.

Mr. J. W. Black, Boston, will make slides from all proper negatives intrusted to his care. Let the response be liberal. Due credit in all cases will be given. Remember that quality and not quantity is what is most desired.

PENNSYLVANIA PHOTOGRAPHIC ASSOCIATION.

THE stated meeting of the Association was held at the store of Wilson, Hood & Co., Monday evening, April 10th, President Rhoads in the chair. A. Bogardus, Esq., President of the National Photographic Association, W. Irving Adams, Esq., Chairman of the Executive Committee, V. M. Wilcox, Esq., of the Executive Committee, and E. T. Whitney, Esq., one of the Vice-Presidents of the National Photographic Association, were present, together with thirty-four members.

William H. Rau was elected a member of the Association. The Committee on Collections for Mr. Schoonmaker reported \$140.50 collected, and more promised.

The Committee on Badge for the members of the Association exhibited a very pretty monogram design, to be printed on a satin ribbon, and worn on the lappel of the coat.

After the routine of business was over, the President introduced Mr. Bogardus,

who arose and addressed the meeting as follows:

"GENTLEMEN: It is something of an accident that I meet you here to-night. I am in the city on the business of the National Photographic Association, and as I am always glad to meet a body of photographers I am glad to be with you to-night. I was pleased to hear so long a list of names at your roll-call this evening, and cheered to see so many of you taking an interest in this live Association. I am glad that you Philadelphia photographers do not think that each one of you embodies within himself all of the art of photography, or all the information pertaining to it, but, on the contrary, you are here each advocating the good of the other. I have always held that any photographer is capable of teaching me something, and I was surprised to find at Cleveland, men who were living away off in the West or South, isolated from their neighbors, who were *full* of useful ideas and information on the subject of our profession. I tell you it is a great thing for so many photographers to assemble together, and mutually communicate what they know—a great thing for them, and a great thing for the progress of photography. In the matter of lighting the subject alone how much has been learned during the past few years. The way we lighted our daguerreotypes fifteen years ago would be laughed at now. No shadowed faces were allowed then, but they are allowed now, and our patrons are learning to distinguish good work from bad, readily.

Let us get together then, and ventilate all new ideas and points, and each one will grow, the Association will grow, and all will be the better for association and contact.

Photographers used to think that wisdom would expire with them. Our Association, if it has done nothing more, has scattered such notions.

I saw a man at the Boston Exhibition who said he saw some good and some bad work there, and he was going home to beat the best of it. That is the right spirit. I am going to exhibit my best work in your city in June, and if I am beaten by others then I must go home and excel my com-

petitors. Let me urge you to make the very best display you can at the Exhibition in June, and we who come to see you as your guests will return home truer and better, and better able to meet the perplexities of our profession and to master its many manipulations. We are coming to a day of better prices and greater appreciation, and we need no longer be ashamed to tell that we are photographers, as we were a few years ago.

I met a drunken photographer in New York a few days ago who ridiculed the National Association. Perhaps some of us may yet bring him to his sober senses. Let us try.

Gentlemen, I am glad to meet you, and I hope to see you all in June."

Mr. Bogardus was loudly applauded on taking his seat.

Mr. Whitney was then called for, and made a few pertinent remarks. He said he had called upon several of the photographers present during the day, and was pleased to have so many urge him to be present this evening. It convinced him that much interest was felt in the Association, and he was gratified to see it. Our art must advance in such hands. He thought it a high honor to be a member of the National Photographic Association, and he wished he lived where he could attend the monthly meetings of such a live Association as this.

He had that day been looking over the large stock of stereo views at the store of Wilson, Hood & Co., and thought of the immense toil and labor it cost to produce those wondrous views in all parts of the world, and how little the artists who made them were rewarded. Better days were coming, though, and we must *work on* and wait. (Applause.)

Mr. Wilcox was next introduced by the President. He said, he would be happy to give a dissertation on light and shade, or some kindred topic, but it was not in his line, yet whatever interested photographers was of interest to him, for it was his bread and butter. To be a judge of good work required much study, and the more we study the more appreciative we become. He well remembered the first pictures he

had taken, and how he speculated over the wonders of the dark-chamber. He was happy to be present, and was glad to see so many earnest workers.

Mr. Adams was next called upon for an address. He said he was surprised that a man of such good sense as President Rhoads should call upon him for an address. However, he would congratulate the President on the size and life of the Association over which he presided, and from what he saw he believed that the Exhibition to be held here in June would be a grand success.

Mr. Bell exhibited three prints of one subject on a card, from negatives developed with the ordinary iron and with the ammonio-sulphate of iron developer—formula given by J. C. Browne, Esq., in *Mosaics*, 1871. A vote was taken without the members knowing which was which, and a very large majority decided in favor of Mr. Browne's development. Mr. Bell stated that if photographers would make their negatives less strong, develop with Mr. Browne's developer, and print in the shade, that much better pictures would be secured.

Mr. Trask exhibited a negative (retouched) to show the good qualities of Clemons's Varnish for retouching upon. He stated that he found it superior to any other varnish that he had tried for the purpose, as it took the pencil elegantly.

Mr. Chute offered a motion that the Executive Committee issue a circular to photographers in Philadelphia and vicinity pertaining to the Exhibition. Carried.

The subject of apprenticeship was again brought up by Mr. Trask, and discussed at some length. Mr. Trask thought that the hope of photography in future was in the adoption of some proper system of apprenticeship. He thought three years should be the shortest term, and all under seventeen serve until they were twenty. At the end of his time furnish the apprentice with a diploma setting forth the branches in which he excels; an apprentice to be honorably discharged from his last place, or not employed by a member of the Association.

Many other excellent ideas were thrown out by Mr. Trask.

Mr. Bogardus said the National Photographic Association was assuredly indebted

to Mr. Trask for the perseverance he displayed in working up this matter, and he hoped for the success of the measure.

Mr. Whitney said he had educated several young men, two of whom were now doing excellent businesses for themselves. He now had one in his third year. He started them first on glass cleaning and copies; second, making sittings and developing; and third, printing.

Mr. Wilson thought the question of apprenticeship was one of importance, as it is to those who are now, and will be, learning the business that the future of photography is to be intrusted. He thought it might be questioned whether the largest galleries were the best places for young men to learn the business. There are plenty of really first-class photographers, who do a small business comparatively, are thoroughly competent to give instructions in all branches of the art, and who can do so with profit rather than inconvenience to themselves. He hoped the question would receive the attention it deserves from the National Association, and be made to serve the best interests of all concerned, both for the present and the future.

On motion, adjourned to witness the exhibition of slides in the Sciopticon by Messrs. Marcy and Bell.

PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.

STATED meeting held April 5th, 1871. Minutes of the last meeting read and approved.

The secretary read a letter from Dr. Wilcocks, in Rome, explaining a new photolithographic process. The letter was accompanied by some proofs of the process.

The President showed some prints mounted on very thin card-board by Messrs. Pawson & Nicholson of Philadelphia. There was an entire absence of cockling, and the whole mounting was exquisitely neat.

The President also showed a novel form of instantaneous shutter designed by Prof. Fairman Rogers. The principle is that of a venetian blind, each slat being connected with its neighbor by cogs, and the whole

made to revolve by detaching a spring. The exposure is extremely rapid.

In the course of the verbal communications, the President mentioned that a Convention of the National Photographic Association would be held in this city in June next, whereupon the following resolution was offered and carried:

Resolved, That during the meeting of the National Photographic Association, to be held in this city in June next, the rooms of this Society be opened to such of the members of the said Association as may desire to avail themselves of its facilities for reading, conversation, and social intercourse.

On motion, the Chair appointed Messrs. Pepper, Corlies, J. M. Wilson, Wallace, and Browne, as a committee for receiving the members of the Convention at the room of the Society.

Mr. Bell exhibited two card portraits developed with ammonio-sulphate of iron, and expressed himself as much pleased with it, though it is necessary to use it much stronger than for outdoor work.

Mr. Sturgis exhibited a photograph of a pigeon letter from Paris, which called forth many expressions of interest.

After adjournment, a half hour was pleasantly spent in examining some new lantern positives.

ELLERSLIE WALLACE, JR.,
Recording Secretary.

FERROTYPERS' ASSOCIATION OF PHILADELPHIA.

THE regular monthly meeting of the Ferrotypers' Association was held at Mr. Lothrop's Gallery, No. 43 North Eighth Street, April 4th, 1871, D. Lothrop, President, in the chair.

Minutes of last meeting read and approved.

Letter received from Mr. Hayes, Danville, Ill., with specimens; to be answered for further particulars.

The Phenix plate question, from the last meeting, was called up. The Association is of the opinion that the dark-tinted chocolate plates give the best satisfaction. Some of the members have tried baking the plates having the greasy substance upon their face with success, it being entirely removed.

A ferrotype, made by Mr. Wilhelm thirteen years ago, was exhibited by Mr. Wise, which he says has been at his door for a long time. The picture was perfect, showing that pictures made upon iron plates and varnished will not fade, while, on the contrary, we received a letter from a photographer not long since stating that his ferro-types faded.

Mr. A. K. P. Trask received the highest number of votes for the best ferrotype.

Adjourned to meet at Mr. Seeler's Gallery, corner 8th and Spring Garden Streets, May 2d, 1871.

C. L. LOVEJOY, Secretary,
500 South Second Street.

BOSTON PHOTOGRAPHIC ASSOCIATION.

THE regular meeting of this Association was held as usual at the studio of J. W. Black, Tuesday evening, March 7th, 1871, President A. S. Southworth in the chair. After the reading of the records of last meeting, Mr. Southworth spoke of the commencement of a new year to the Association, and sincerely hoped the meetings would be both interesting and instructive, and be the means of our making better work; also wished to state that the report in the *Philadelphia Photographer* of the Wing & Schoonmaker suit was not wholly true, the Judges of the Supreme Court standing four for and four against the patent, and he did not consider that any decision at all. After which followed a lengthy discussion on the negative bath, in which many of the members gave their method of managing a bath. The variety was so great that I will not attempt to give them all.

Mr. Black showed the members an 11 x 14 negative taken that day under a not very favorable light, in a silver bath containing only 15 grains of silver to the ounce of water, with 15 ounces of C. P. nitric acid to two pounds of nitrate of silver, made of the strength of 15 grains to the ounce. Mr. Black stated that the bath had been in use one week; he used no bromine but chlorine instead in his collodion, found it made as good a negative as with the usual amount

of silver of 40 grains to the ounce, and worked very much quicker.

By invitation of Messrs Black and Foss, the members and their ladies participated in a very agreeable entertainment on the following evening at Wesleyan Hall, consisting of dramatic readings by Mrs. E. J. Foss and an exhibition of transparencies by Mr. J. W. Black. Mrs. Foss read selections from Shakspeare and other authors in a very able manner and worthy of a professional, which were loudly applauded. The entertainment closed by an exhibition of views of ruins in Athens, delineated by Mr. Black in his usual happy style, and all passed a very pleasant evening.

At our last meeting, April 4th, a communication was received from Mr. G. H. Loomis recommending to the consideration of the Association the proposition for a summer vacation for from two to four weeks in August, when we and our help could all, for the time being, flee to the country, away from the smell of the dark-closet, and recuperate exhausted energies. Others were doing it, and he hoped it would find favor with our photographers. Mr. Black thought it an excellent idea, but a very difficult one to carry into effect; thought it would be impossible to make it universal, and as it was some time yet to August, would like to have the subject remain open for discussion. Mr. Foss thought it might be done without losing anything by it; he for one was in favor of it, and should close his place of business, as he had done the two preceding summers, from two to four weeks.

A motion was made and carried that a committee of three be appointed by the chair to consider the practicability of closing our rooms for a short time the coming summer. Accordingly the President appointed Messrs. Black, Foss, and Marshall as that committee.

Mr. Black asked if any present had succeeded in making pictures with nitric acid instead of silver. (No doubt Mr. Black meant with a small amount of silver.)

Mr. Foss said he had not succeeded in making as good negatives with the weak bath and *much* acid, but did not think he had given it a fair trial, but he had seen as fine negatives from Mr. Black's establish-

ment made with it as by any other process; thought we were apt to try a new process once or twice, and if we did not get good results immediately, decide it a fault of the process.

Mr. Southworth said that many writers gave formulas which they themselves had never tried, and set photographers experimenting at a great disadvantage, but this was a process worked successfully by Mr. Black daily, and he would like to ask Mr. Black its advantages.

Mr. Black answered that it made a finer deposit of silver, worked smoother and softer, and was more economical; he did not see the use of so much silver in a bath when so little was used. A few years ago 80 and 90 grains of silver was used in printing, now hardly any one uses over 40 grains.

Mr. Richardson asked if there was not danger of getting heavier shadows without bromine in the collodion.

Mr. Black answered he thought not if you give the proper exposure.

On motion, it was voted that the thanks of this Association be tendered to Messrs. Foss and Black for their entertainment at Wesleyan Hall.

Mr. Southworth expressed the wish that we might have each evening a short lecture upon photography, commencing with the Daguerreotype, and follow along to the present day.

Voted to adjourn.

E. F. SMITH,
Secretary.

CINCINNATI CORRESPONDENCE.

MR. EDITOR: As the *Philadelphia Photographer* is the accepted mouthpiece of the members of the National Photographic Association, I thought a few lines in relation to those who reside in this smoky city would interest those who have not had the pleasure of visiting the several magnificent galleries in Cincinnati. On my arrival I visited the immense establishment of J. Landy, Esq., on Fourth Street. One of the features of this art studio is the massive walnut door (*which is always closed, on the Not-man plan*). On entering the reception-room you are welcomed by the cheerful and talent-

ed lady who presides with grace and dignity over this department of this temple of art. In this room are some two hundred specimens, mostly 14 x 17, all of which are superior to those grand effects of light and shade which Mr. Landy sent to the Cleveland Exhibition, and which there proclaimed him the Salomon of the West; and as one of the most noted of the New York visitors stated to Dr. Vogel, "Mr. Landy's specimens are equal, if not superior, to any in the city of New York." As Mr. Landy intends to send some of his later efforts to the Philadelphia Exhibition, which is so near at hand, all will have a chance once more of studying these grand effects of light and shade, which, on entering the operating-room, we found were produced by the most simple means. As one of the students remarked, it was "not the old-fashioned screens we saw which produced the effects, but *Landy*, who knew just what was wanted, and posed the sitter without any fuss or unnecessary fixing, at the same time conversing, in a mild quiet way, on anything but photography." One stands amazed at the wonderful effects this *artist* produces with such rapidity and so few accessories. In this room we found operators one hundred years old; perhaps I should say four operators whose combined years of labor in the heliographic art numbered one hundred and twelve years, and here they were *learning to take photographs*, and all informed me that they were more than satisfied. They said, "We first saw Mr. Landy's gems of art at the Cleveland Exhibition, and all made up our minds to stand in the front rank, and for that purpose are taking instruction from one who, though younger than us we judge is capable of imparting it." These gentlemen—these old-time workers—were loud in their praise of *Edward L. Wilson* and his grand conception, *the National Photographic Association*.

Passing into the printing department I found a large force of hands at work, and each man (no boys) seemed to know just when to take in the frames without having to pull at the same half a dozen times before the printing was completed. One of the assistants having charge of some eight porcelains, turned out some of the best

effects on porcelain glass I have seen for weeks; almost equal to Thomas's of New York. In the mounting-room at Mr. Landy's I saw some *thirty thousand imperial cards* of the solid men of Cincinnati. These, with some *twenty thousand* more, were to illustrate a very valuable book soon to be published in this city. The prints were in the Landy shadow styles, and not only were a credit to Landy, but will tend to place the art still higher before the world. We also noticed a copying table of Mr. Landy's own construction, which beats anything in the market, but as one will be on exhibition in Philadelphia, all can see it and judge for themselves. No more for this number, but shall try and get in in time for the June issue.

Yours, in the best of bonds,
PERAMBULATOR.

CINCINNATI, April, 1871.

We give place to this communication as a deserved testimonial to one of the most persevering and progressive photographers in the country, and a real live, thorough going, earnest member of the National Photographic Association. Moreover, we are glad to say that Mr. Landy has sent us some charming negatives, prints from which our readers shall soon have the pleasure of seeing. We believe then they will indorse all that our enthusiastic correspondent says about the quality of Mr. Landy's work.—Ed.

NOTES IN AND OUT OF THE STUDIO.

BY G. WHARTON SIMPSON, M.A., F.S.A.

Apprenticeship and Tuition in Photography.
Cameo Vignettes.

Apprenticeship and Tuition in Photography.—The reference of Mr. Engelmann to the difficulty of inducing work people to get out of grooves or stereotyped modes of working reminds me of remarks I have seen from time to time in your pages on the importance of apprenticeship in connection with photography, and to your own remarks on the subject. The "Old Photographer" recently had some remarks on the subject, which, with your permission, I

will quote. Being really a very old portraitist, as well as an old photographer, having graduated in the art in Daguerreotype days, he speaks with some authority, so far at least as it can be derived from experience. He says:

"Your esteemed American correspondent (Mr. E. L. Wilson), I notice, has recently referred to an important question, which has yet received little attention amongst photographers. I mean the subject of apprenticeship. At present by far the greater number of professional photographers are self-educated in their art; they have 'picked it up,' having commenced life with some other business or profession. As a rule, men who thus 'pick up' an art have some original fitness or proclivity for its exercise. But whence come into the art such men as Mr. Bovey recently described as familiar types of the photographic printer,—the men who varied in appearance from that of a cross between a dog-fancier and a pugilist, and a seedy out-at-elbows swell? These never became photographers from natural fitness or affinity; they were never apprenticed to the art. Whence came they, then? Perhaps the source is not difficult to trace; but it suggests the importance of the apprenticeship question. I fear a large number of those who have become photographic assistants of late years have first come into contact with the art as lads hired to clean glasses, and assist in the more mechanical departments of the studio, dark-room, and printing-room. These also 'pick up' some knowledge of the art, and eventually commit their fortunes for life to it; not because of artistic or scientific tastes and capacity, but because it seems to present the easiest and most handy means of making a living. If a system of apprenticeship were organized, it would remedy much of this. The apprentice who is specifically taught, and graduates in his art, would have in his indentures a charter to practice as a skilled man, and give him a distinction from the mere pretender. This is a question which touches the future of the art, and deserves attention."

Most photographers will agree that the subject demands attention, and in an organization like the National Photographic Asso-

ciation you have opportunity of giving it that attention. The fathers of photography were drafted into the art by a process of "natural selection;" but the most ardent Darwinian would scarcely like to depend upon this process for continuing to supply capable photographers. It is at once curious and interesting to glance back and ascertain from what sources photography originally had its rise. Wedgewood was a potter; Davy a chemist; Nicephore Niepce a non-professional experimentalist; Daguerre a dioramic painter; Talbot a wealthy amateur of science; Reade a clergyman; Archer a silversmith's assistant; Diamond a medical man. These are the principal old world names associated with the origin of the art. Amongst those who, on this side, have attained distinction in the practice of the art, it is worth noting, many of the ablest had first acquired art training as artists. Amongst these I may mention as at once occurring to my memory the names of Adam Salomon, Rejlander, Robinson, Bedford, Wilson, and Joubert. There are many more, but I simply mention those I immediately remember, and that because it illustrates the subject, the necessity for training, or apprenticeship, in order to secure a worthy future for the art. All the best men now in photography have had art training, either in some former profession, or as the result of self-education.

Cameo Vignettes.—I believe that in one of my letters last year I described to you a very pretty style of card portrait, which was becoming popular in some continental cities, Milan and Vienna especially. In the absence of any specific name I described it as a cameo medallion. Possibly it may by this time have been introduced into America. It is at present just in course of introduction to this country; two or three houses having taken the matter in hand, with, so far as the present indicates, great promise of success. The name under which they are introducing the new card is the "cameo vignette." As the effect is very pretty, and easily produced, and as it readily commands a good price, the advance made upon ordinary prices being at the rate of fifty per cent., I will venture again to describe the picture and its mode of production, for

the benefit of your readers, and I at the same time inclose two or three examples in this letter.

The cameo vignette, or cameo medallion, is of the usual card size, containing a vignetted head and bust, or three-quarter length, preferably the former. After vignetting, an oval mask is laid upon the figure and vignetted portion of the background, and the margin exposed so as to print a deep black, forming a dark border round an oval aperture containing a vignetted image. This is finished, trimmed, and mounted in the ordinary manner. After this it is subject to pressure under an oval convex die, like that used for the "diamond cameos," the die being, of course, of precisely the same size and shape as the oval mask which protected the image whilst the border was printing. The size of the oval in the examples before me is, in the major axis, about three inches, and in the minor axis two inches and one-eighth. The white edge of the mount surrounding the black framing the image is about one-eighth of an inch broad.

The general effect of the picture is striking as well as novel. The convexity of the mount gives the effect of relief, with which many of your readers are familiar, and which is seen in enamel portraits on the well-known convex tablets. Indeed, these portraits in many respects very closely resemble ceramic portraits, in the appearance of delicacy, force, and finish. The especial advantage to be gained by the deep purple brown or black of the border is the peculiar delicacy conferred, by the force of contrast, on all the half-tones and shadows in the image itself, and gives much value to all the lights, and such especial delicacy to the flesh. The very deep-tinted spandril gives an effect of brilliancy to the lights, and extreme tenderness and delicacy to all the shadows in the image, although the picture is printed sufficiently deep to secure vigor and force.

As the trouble of production is very slight, and the cost of extra appliances in the shape of press and die would be repaid by the first two or three orders, I cannot but think that a style so effective is well worthy of the attention of portraitists.

Photographing by Moonlight.

Mr. Grasshoff's Picture in the March Photographic World.

BY W. J. BAKER.

EIGHT or nine years ago a genius, who came around with a machine that he called a "Stereopticon," was wont to presume on the public ignorance by calling attention to some of his slides, as "instantaneous moonlight views taken at sea, by a newly discovered French process." Of course, a Frenchman would do this? Any one could. With similar veracity, he used to assert that he produced his effects by combining on the screen the two images of a stereogram.

It is probable that most of the public believe him to this day, or at least have forgotten him, and not detected the humbug. Some experiments made at that time seemed to show that reflections of moonlight, even from bright white surfaces, would produce no impression on the plate, and, as it is further stated, that the actinic effect of the full moon is over thirty thousand times less than that of a cloudy day, the writer has been waiting in a mildly Micawber-like way for something to turn up to enable him to get a moon-struck plate. Within a few days I have asked myself, "Was, after all, the moonlight yarn an unconscious prophecy?" Now we have it; a French process for taking moonlit landscapes, or rather water(s)caes at present.

Mr. E. P. Ogier, of Jersey (Channel Island), towards the end of March last, favored me with a communication calling my attention to an article of mine in the *Philadelphia Photographer* of December, 1870, in which, commenting on Mr. Robinson's picture, "The First Hour of Night," I asserted that "the only photograph which can be taken by moonlight is one of the moon herself, and that properly is not a moonlight, but a sunlight view;" or words to that effect.

Mr. Ogier sent with his note some stereograms taken, he explains, by night, of which there can be no doubt. The process he promises to give me in a month. It must be a sensitive one, and I am very anxious to know how far it may be useful in the

daytime for better instantaneous views, and to shorten exposure in portraiture.

Were I to exercise my Yankee birthright I would guess that the plates were dry rather than wet. The pictures are, as pictures, not near as good as the artificially prepared moonlight effects, and are interesting mainly as recording the first stage of what may perhaps be a new era in our manipulations.

The track of the moon in the sky is marked by a bar of light showing the exposures to have been fifteen or twenty minutes; the wake of light on the waves is also strongly brought out, and in some the bright clouds are visible. There is a faint illumination in the atmosphere, which is shown by dark objects, as trees, &c., cutting against it; further, no detail appears, except in one picture, which is strikingly unlike the others, so much so as to suggest that the moonlight was assisted by a strong twilight (this is only a guess). It represents a sky full of light, water the same, into which a cape extends, with prominent rocks, &c., well marked. On the shore sits a man, the bright water showing through him as if the operator took his position after uncovering, and left it to stop the exposure. This plate must have received many times more actinism than the others, and much more resembles an under-exposed day view than they do.

I inclose to you, Mr. Editor, some of Mr. Ogier's views, knowing how deeply you will sympathize with me in the interest I feel in his experiments. The promise he makes to give to the world his means gives him a double claim to regard, and I would express my personal obligation to him for enabling me to correct my statement that it was impossible to photograph by moonlight, although I am about as far as ever from believing in instantaneous moonlight.

Mr. Grasshoff's Picture.—Moonlight and beautiful women seem to have a vague but indissoluble association in the masculine mind, and we come naturally from considering photographs of the former to pictures of the latter. The charming illustration in the March number of the *World*, copied from cards by Grasshoff, cannot be

passed by. Of course, all the good points are much more prominent in the originals than in the copies, still the variety of pose and expression that the wizard photographer has conjured up from one young face is all there; and there is, too, in the copies something left of the great breadth of light and shade with which the subject is treated throughout. In the originals this is masterly, and greatly enhanced by the absence of focus.

Of so protean a subject it is quite impossible to pick out the one that is best, or most like, especially as none of us enjoy personal acquaintance, so I cannot undertake to answer your question, Mr. Editor, but I would like to point out that these pictures are a beautiful example of what is, in my opinion, the true sphere of photography. Probably not one of them is in a full sense a *portrait*. Each records a passing moment, a transient expression, a shade of fleeting feeling, on the fair young face. This is all, and this is the utmost that can be accomplished in photography. To make a portrait, to portray the individual, this is the painter's or sculptor's task, and cannot properly be done on a less scale than the size of life. The artist, if worthy of the name, represents not merely the form (likeness), but penetrates into the past of the individual, sums him up, embodies his tendencies and possibilities, and is historian and prophet too. Certainly we must grant that each moment of life has contributed something to mould the character and expression of the present, and so partially, and with more or less completeness in different individuals, the whole is present at any instant; but the feelings of the moment will be uppermost, and their outcome in the face obscures and shades all else, and the impression is not a portrait. Here is precisely where neither the public or ourselves recognize the limits of our art. The former crowd to us for a cheap portrait and are satisfied, not because they get it, but because, bless their souls, they have no conception of what a portrait should be, and could not recognize one if they saw it. A few of our customers, persons of taste, we often feel push us too hard, and want what we can't give them, the full portrait, or

maybe a moment that they themselves are powerless to recall.

We ought not to suffer ourselves to be fogged into such attempts. The stolid and unimpressible may perhaps get their "photographic portrait" unenlivened by a touch of grace or prettiness, but only one shade, a single expression, is all that the most vivaciously intelligent face ought to be suffered to expect. If they want something else let them try again, and pay again, provided our part was properly done at the first.

Dr. Vogel's Handbook of the Practice and Art of Photography.

THIS excellent work is now entirely ready, and the finished copies are being scattered over the whole country, while our office is *alive* with them awaiting your orders for them.

We commend it to you heartily. A criticism of the work of such a man as Dr. Vogel is hardly called for. A great many of our readers know him and know his abilities, while you *all* know him by his valued contributions to our pages. His book is just like him. Freshly and vigorously written, full of life and practicability, each page bears upon it evidence of the fact that the author is *master* of what he so lucidly teaches.

His book is not a mass of carelessly *compiled* matter gotten up to sell, but is a carefully and conscientiously written volume, produced for those with whom the author has been in daily contact for years, and for whose welfare he has the deepest interest. That this has caused him much labor the following extracts from the Preface to the German Edition of his work will show:

"Three years have elapsed since the first part of the work, which has now reached its conclusion, appeared before the public.

"Many circumstances combined to retard its completion. Particularly the void which I found in our knowledge of Photo-Chemistry, Photographic Optics, Practice, and *Æsthetics*. These very circumstances cause in me the desire to attempt, so far as is in my power, to remedy this defect.

"I laid aside my pen, after a few sheets had been written, in order to carry on, for

several months, experiments in chemistry and optics, and investigations of a technical and æsthetic character. I had to create first the material for many chapters of this book before I could write them. I need only refer to my works on *Photo-Chemistry* and on *Collodion*, on *Testing Object Glasses*, on the *Principles of Illumination*, on the *Construction of the Atelier*, and so on, not to mention many smaller publications; and this must be my excuse for requiring so much time in laying my book before the public.

"On the other hand, I was frequently interrupted in my labors. The International Exhibition of 1867 called me to Paris; the expedition to observe the solar eclipse of 1868 called me to Aden, in Arabia; the Photographic Archæological Expedition of the same year required my presence in Upper Egypt. The manuscript of my book was my companion. Some chapters were written in Paris, others on the Red Sea; some on the Nile, and some while I followed the kind invitation of the American photographers to cross the Atlantic."

After his arrival in America, and after he had visited nearly all the larger cities of the Union, Dr. Vogel sat for many days in our humble sanctum, and finished his work, going over, revising, and rearranging the whole to suit his American readers. He says in the Preface to the American Edition:

"I have endeavored to lay down in this book not only the formulæ, a description of the different apparatus and manipulations which are necessary for the mechanical production of a photographic picture, but I have tried also to elucidate those art principles which we must follow when we wish to make an artistically beautiful picture.

"Unless we treat the pose and illumination in an artistic manner, the best of chemicals and the most exquisite lenses will fail to produce a beautiful picture. To speak of these principles is for a Photographic Handbook a necessity, particularly as at present portraiture is the most important branch of photography, and is likely to remain so.

"In the American Edition I have tried to adapt the Handbook to the wants of the American photographic public, and prize it

indeed as a great favor that, thanks to the honorable invitation which I received to visit this country, I was enabled to inspect personally many American photographic establishments, and to appreciate them.

"I would feel happy if my work should meet with as many friends as I had the good fortune to meet during my brief stay in the United States."

That Dr. Vogel's last expressed desire will be fulfilled we have no doubt, and as he is pecuniarily interested in the book, we believe his friends will give him a benefit such as he deserves, for such be assured his book is worthy of.

We are much indebted to Mr. Edward Moelling, a talented amateur photographer of this city—a German, and a permanent attaché of the *World*—for his able translation of Dr. Vogel's work. So far as the work of the publishers is concerned no pains or expense have been spared to make the book handsome and good. It is printed on stout white paper; the wood-cuts are mostly elaborate and expensive, and the four photographs which accompany it to illustrate the lighting of the subject, all combine to make it what it emphatically is, namely, a thoroughly practical and invaluable "Handbook of the Practice and Art of Photography." We commend it to the kind reception of all who can appreciate such a work. Please read the advertisements of it.

GERMAN CORRESPONDENCE.

Acetic acid in the developer a cause of fogging—Sensitiveness of the chloride, bromide, and iodide of silver—On the quantities of iodizing salts in the collodion—The effect on prints of carbonate of ammonia and fuming with ammonia—On the cracking of the film.

WE once more enjoy the blessings of peace, and hope that in spite of the disturbances in Paris we will continue in their enjoyment. Trade and industry revive; most of our soldiers have come home, amongst them our friend Petsch, who has already returned to his former sphere of usefulness, and the hands which a few months ago were blackened with gunpowder, are now blackened with splashes of silver. The

meetings of our Society show all the old familiar faces again, and material for lectures and discussions is more plentiful than ever.

At the last meeting of the Society for the Promotion of Photography, a peculiar and, according to my knowledge, novel cause of fogging from acetic acid, was brought to the notice of the Society. In an atelier, in Hamburg, veils showed themselves on development, and a change of the collodion, the bath and the sulphate of iron failed to remove them; finally, the cause was traced to the glacial acetic acid. I myself have tried the acid, and, strange enough, chemically no foreign substance which might produce the disturbance can be traced, except a scorched smell; but the acid yields foggy pictures in my hands also, and it has since been found out that several samples of glacial acetic acid, which have been purchased in this market, have caused the same trouble. It is evident that the glacial acetic acid contains traces of the numerous impurities with which we meet in the ordinary acetic acid, and under these circumstances it will be best to employ a developer without it, as recommended in my last letter.

Dr. Schulz Sellack, a young scientific gentleman here, has lately made, in my laboratory, a series of experiments, the results of which he has published; they may, perhaps, become of great practical value for the photographer.

He has established the sensitiveness of the different collodions for the colors of the spectrum. The results are very peculiar.

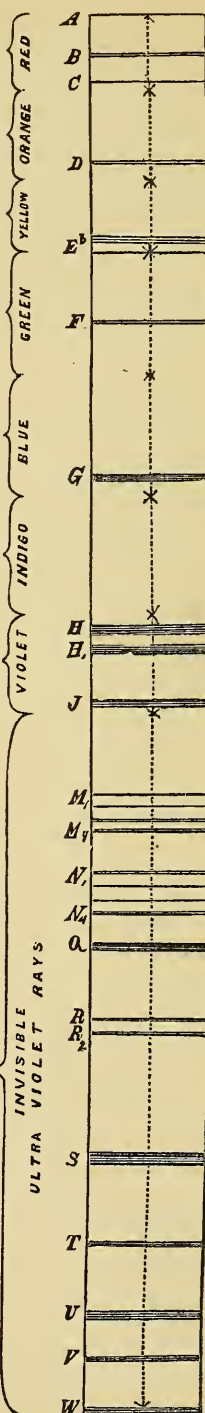
Collodions containing iodide of silver, bromide of silver, or chloride of silver, are all sensitive to the ultra violet, invisible rays of the solar spectrum. The sensitiveness to the visible rays, which practically is of the most importance, is very variable; with chloride of silver it reaches only to the line H; violet, indigo, blue, and particularly green, exercise no influence whatever on it. With iodide of silver the sensitiveness extends a little beyond the line G, or into the blue, while bromide of silver is sensitive to the beginning of the green (to the line F).

The sensitiveness of the mixed collodion, bromo-iodide and chlor-iodide, reaches

much further. A mixture of iodide and bromide of silver, or collodion containing iodine and bromine, the same as is ordinarily used in photography, is sensitive to the border of green and yellow.

Dr. Schulz found also that a washed and dried film of iodide of silver, absorbs almost all the violet light. When such a plate, which is still quite transparent, is placed in front of the objective and exposed, we will find that the action of the light side, containing more violet light, is considerably diminished, while the shadows which contain more blue, yellow and green light, act with undiminished force. In this manner, soft and harmonious pictures may be obtained from "hard" illuminated objects by increasing the length of time of the exposure.

Dr. Schulz recommends this mode of working, when objects showing very strong contrasts of light and shade have to be taken, for instance interiors with bright windows, and where



sometimes the objects in the neighborhood of the windows are over-exposed before the dark parts have had time to impress themselves on the plate.

I have lately made some experiments about the *quantities of iodizing salts* which we may add to a collodion. I employed salts which are easily soluble, iodine, iodide of sodium, and bromide of ammonium; these dissolve in large quantities, giving a clear solution; still I found that the amount of salts which a collodion can bear without showing faults is very small. When we add more than 22 grains of sensitizer to 100 grains of plain collodion, containing 2 per cent. of cotton, we will be troubled, on silvering, with yellow flame-like streaks, which will remain after developing and fixing. A collodion containing the above-mentioned percentage of cotton will bear no more than 11 grains of sensitizer per ounce. I have found, however, that it is preferable to take less. A larger quantity of the sensitizing salts will make the collodion a little more sensitive, but a smaller quantity will work clearer, and with from 8 to 10 grs. of salt to the ounce of collodion the difference in sensitiveness is very small. Collodion containing more cotton will also bear a larger addition of the sensitizing salts.

In one of my recent letters I wrote to you, that the carbonate of ammonia in powder, placed on the pad at the back of the paper in the printing-frame, might be substituted for the fuming process with liquid ammonia. Some care is necessary, in order to distribute the powder evenly over the whole surface. I have worked a good deal with this substance, and would call attention to the following point.

The carbonate of ammonia consists of two substances, the one is bicarbonate of ammonia, the other the simple carbonate of ammonia; the latter is the effective ingredient in the above-named process; but the simple carbonate of ammonia is very volatile, and when the powdered salt is exposed to the air, the active ingredient will soon evaporate, and the inactive bicarbonate will remain; it is therefore necessary to keep it in well-corked bottles. I have noticed frequently that it is sold and shipped done up

in paper, and it is evident that in this way its quality must deteriorate.

The fuming with ammonia is very generally practiced in the United States and Canada. I could not exactly see its advantage, for the greater rapidity in printing, which was pointed out to me as such, can hardly be the reason when we consider the beautiful American light. Lately I have seen, however, that under some circumstances its employment may be of great advantage. My printing bath was reduced to the strength of 1:50, and the pictures had become weak and without vigor. I fumed the paper, and immediately the prints showed such brilliancy and power, such depths in the shadows, such beauty in the high lights, as I had never seen before. Carbonate of ammonia in the printing-frame produced the same result. I tried next, with a strong bath, the effect of fuming. It was much less marked; the fumed paper would print perhaps, a little more rapidly, and appeared only slightly more brilliant than those that had not been fumed.

Before the London Photographic Society they had recently a discussion about the cracking of the film, and the opinion was advanced that the delicate transparent lines in the split film, are fissures. I, myself, was of the same opinion until I had examined them under the microscope, when I found that they are elevations or ridges instead of depressions or fissures. They will disappear on being rubbed over with lamp-black, or by going over them with the finger, or a piece of leather, which depresses or levels the ridges. The lamp-black has the advantage that it is very smooth, which facilitates the rubbing, and that it fills the places which have been torn open by the rubbing. As I have stated in a previous letter, a coating with gum will put a stop to the splitting of the film. A very diluted solution should be laid, with as dry a brush as possible, on the varnished side of the plate, that is, a brush which has been dipped into the solution, and from which the excess of the liquid has been pressed out again. Mr. England recommends the painting of the cracked film with India-ink. The effect of the India-ink is due to the gum contained in it. In regard

to the tendency of the film to split different circumstances are at work. It is peculiar that films on plate-glass show a stronger tendency than those on sheet-glass. I would like to put the question to American photographers, *if on albumenized plate-glass negatives the cracking of the film has been observed.* This matter needs further investigation. It is of much importance, as we hear constantly complaints that valuable negatives are lost from this cause.

THE EXHIBITION.

REGULATIONS AND ARRANGEMENTS.

THE Executive Committee of the National Photographic Association direct the attention of intending exhibitors to the following:

The Exhibition will open Tuesday, June 6th, 1871, at Horticultural Hall, Broad Street below Locust, Philadelphia, Pa.

Any photographer in good repute will be permitted to exhibit examples of his work, whether a member of the Association or not.

Space must be applied for, although the Committee of Arrangements hope to find room for all.

The name and address of the exhibitor must be on each picture, or supplied so that it may be conspicuously placed among his contributions. If for sale the price may be attached.

Two complete lists of each lot must be sent to the Local Secretary, with date of shipment by mail; and where a party sends more than one package the packages should be numbered, both on the packages and on the lists.

The Committee of Arrangements will reject any articles that are deemed improper for exhibition.

No articles will be permitted to be withdrawn until the close of the Exhibition without a permit from the committee in charge.

Excellence and novelty should be the first considerations in selecting pictures for the Exhibition.

Carefully fasten all pictures in the mats, when accompanied by such, and fasten them well in the frames.

A good method of putting up pictures, where the size and quantity of frames is not large, is the following: Have the lid and bottom of the box you use nicely planed inside, and covered with neat cloth or wall paper of a gray neutral tint. To these screw your frames in tasteful order, and again screw them to the frame of the box. When unpacked these covers may be fastened to the uprights in the Hall, and thus much labor be spared in unpacking and repacking. When this method is practiced shallow boxes are best.

Use strong, new boxes, for packing, as the same ones must be used for repacking.

Screw all the covers and bottoms on. Don't use nails.

Have your name and address on the cover of every box, outside, so that we may see who it is from; and inside, to save our marking it to be returned.

Have your name and address *somewhere* on each frame of pictures.

Have holes made for screw-eyes. Screw-eyes and cord will be supplied at the Hall.

Very large frames may be sent without glass, and proper care will be taken not to soil pictures not covered with glass.

Express or freight charges *must be prepaid.*

Articles for exhibition will be received at the Hall from June 1st to 6th; not earlier.

Mark all packages as follows: "Photographic Exhibition, care Wm. H. Rhoads, Horticultural Hall, Philadelphia, Pa."

By order of the Executive Committee.

WM. H. RHOADS, Local Sec'y,
1800 Frankford Avenue, Philada.

ARRANGEMENTS FOR ATTENDANTS UPON THE EXHIBITION AND MEETINGS.

Last year it was the pleasure of the Permanent Secretary to say, *Go to the Exhibition.* This year he has much greater pleasure in saying, *Come, come, come.*

That you may do this at as little expense as possible he has been fortunate enough to secure the following railroad accommodations:

1. *The Pennsylvania Central Railroad Company.* Pittsburg and intervening places to Philadelphia. Fare two cents per mile. Write to me for an order on the ticket

agent at your station for an excursion ticket. See Nos. 4 and 12.

2. *The Philadelphia & Erie Railroad Company.* Erie and intervening places to Philadelphia. Fare two cents per mile. Write as above for order for ticket.

3. *The Northern Central Railroad Company.* Canandaigua and intervening places, to Philadelphia. Fare two cents per mile. Write as above for order for ticket.

4. *Pittsburg, Cincinnati & St. Louis Railway and Branches.* "Pan Handle Route." Chicago to Columbus, Ohio; Indianapolis to Columbus; Logansport to Columbus; Columbus to Pittsburg; State Line to Logansport, and Dayton to Pittsburg, and thence to Philadelphia via No. 1. Free return to all who paid full fare coming on. Buy your tickets coming on, and get your certificate entitling you to free return, at Philadelphia, of me. These certificates will be received by the conductors as fare.

5. *Hannibal & St. Jo. Railroad Company.* St. Joseph, Mo., to Hannibal and to Quincy, and from Cameron to Kansas City. One-fifth fare returning to all who paid full fare coming on. Send to me for order.

5½. *Kansas City, St. Joseph & Council Bluffs Railroad.* Same terms as No. 5.

7. *Central Pacific Railroad Company.* Sacramento and San Francisco to Omaha. Round trip tickets will be sold at a greatly reduced rate to Omaha to all parties starting between Sacramento and Ogden. Parties starting east of Ogden see No. 7½.

7½. *Union Pacific Railroad.* Ogden to Omaha. Same terms as No. 7.

8. *Chicago & Northwestern Railway.* Omaha to Chicago; Milwaukee to Chicago; Madison to Chicago, and Freeport to Chicago, and all intervening places; and thence to Philadelphia by Nos. 9 and 1. Return ticket at one-fifth the regular fare. Certificates to be obtained of me in Philadelphia, which will entitle the holder to a ticket at the above rate, only at the office of the Company, No. 125 Lake Street, Chicago.

9. *Pittsburg, Ft. Wayne & Chicago Railway Company.* Chicago to Pittsburg and intervening places. Will also sell through excursion tickets to Philadelphia by special arrangements. Fare two cents per mile. Send for order for ticket.

10. *Kansas Pacific Railway.* Denver and intermediate places to Kansas City. Round trip tickets at half fare. Send to me for order. Kansas City to Chicago via No. 5½, thence to Philadelphia by No. 9.

11. *Chicago, Rock Island & Pacific Railroad.* Omaha to Chicago and connections. Sixty per cent. of regular fare, both ways; for excursion ticket see No. 7.

12. *Cleveland & Pittsburg Railroad.* Fare two cents per mile. Send for order for ticket.

13. *Louisville & Cincinnati Railroad.* Trip ticket from Louisville to Covington and return for \$4, or to Cincinnati for \$5, the latter including two transfers to and from Covington to hotel or depot in Cincinnati. Tickets good until used. Tickets on sale at corner Brook and Jefferson Streets, Louisville. Send for order for ticket.

14. *New Orleans, Jackson & Great Northern Railroad.* Tickets will be sold, at the office in New Orleans, through to Louisville, Cincinnati, or Cairo, at three cents per mile, usual rate being five cents. Send for order.

15. *Philadelphia, Wilmington & Baltimore Railroad.* Baltimore to Philadelphia. Fare one-third abatement each way. Send for certificate. Parties in Washington, and on Balt. & Ohio and Del. Railroads, should go to Baltimore and take this line. B. & O. R. R., no arrangement.

16. *New York Central and Hudson River Railroad Companies* will sell to all applicants, at any station, at two cents per mile. No order or certificate required.

17. *Erie & Atlantic & Great Western Railways.* Buffalo to New York and return, \$13, and to New York, \$12, and thence to Philadelphia, via No. 18. Arrangements pending for way places. Send for order for ticket.

18. *New Jersey Railroad & Transportation Company.* New York to Philadelphia. Fare \$4, for the excursion. Tickets to be had at the foot of Courtlandt Street. Parties from the Eastern States, and all other sections, taking New York in their route, must get an order for, and apply as above for excursion tickets. Send for order to the Permanent Secretary.

19. *Narragansett Steamship Company.* Boston to New York, thence to Philadelphia, via No. 18. Arrangements pending.

20. *Philadelphia & Reading Railroad*

Company and branch roads. Arrangements pending. Send for order.

21. *Grand Trunk Railway* of Canada. Canada lines, one and a half cents per mile. American branches, 2 cents per mile. Send for order for ticket.

22. *Lehigh Valley Railroad Company*. Return free to all paying full fare coming on. Send for ticket order.

Arrangements are pending with other companies, so that parties not accommodated by above list may apply for order for ticket and they will be favored if possible.

All applications for orders should be in the following form :

EDWARD L. WILSON, Per. Sec.

DEAR SIR: I wish to attend the Philadelphia meeting. Please send me order for ticket. I am (or not) a member of the National Photographic Association. I start from — on the — road.

Parties starting from Chicago, St. Louis or Cincinnati may purchase through tickets to Philadelphia and return, good for a length of time. Further information given when orders for tickets are sent, and in circular.

Photographers *not* members of the National Photographic Association may receive the commutation in most cases, and by many of the companies are permitted to bring members of their families along.

THE EXPRESS COMPANIES.

Articles for exhibition will be carried to Philadelphia by the Adams, National and United States express companies at one-third abatement each way. Goods, when reshipped, will be weighed here, and the return freight marked on each package.

HOTEL ACCOMMODATIONS.

Continental Hotel, Ninth and Chestnut, \$4 00 per day. "Best hotel in America."

Girard House, Ninth and Chestnut, \$3.00.

La Pierre, Broad below Chestnut, \$3.00.

Colonnade, Fifteenth and Chestnut, \$3.00.

St. Cloud, Arch St above Seventh, \$3.00.

Bingham House, 11th and Market, \$2.50.

All the above are excellent houses, and the rates are reduced for the photographers. Parties desiring at less rates will be given the names of hotels to suit all circumstances.

EDWARD L. WILSON,

PHILADA., PA. Permanent Secretary.

THE ARRANGEMENTS FOR THE WEEK.

The Exhibition, as has already been stated, will be held in Horticultural Hall, Broad Street below Locust, opening Tuesday afternoon, June 6th, 1871.

The meetings of the Association will be held in the lecture-room of the Hall, beginning Wednesday, June 7th at 10 A.M., where all members must report themselves for register, tickets, &c.

Besides the business meetings, practical papers will be read by Messrs. Kurtz, Kent, Notman, and other leading men in the art; besides discussions on the production of work; report of the Committee on the Progress of Photography, Apprenticeship, Medals, &c., &c. Scovill and Holmes.

The Local Secretary's office will be open at the Hall during Tuesday and during the Exhibition, to supply season tickets to the members for the Exhibition, lectures, &c.

The Permanent Secretary's office will also be open at the same time for the admission of new members and for supplying railroad tickets, blanks, &c.

A grand public reception will be held in the American Academy of Music (next door to the Exhibition Hall) on Tuesday afternoon, when addresses by his honor the Mayor of the city, and others, may be expected, together with fine music and other entertainments.

On Tuesday and Wednesday evenings, Prof. Henry Morton, Ph. D., President of the Stevens Institute of Technology, Hoboken, N. J., and late of Philadelphia, will deliver his celebrated lectures on *Light*, at the Academy of Music. These lectures will be illustrated by magnificent experiments, which have never been *excelled*, and on a scale grander than anything ever attempted before. Prof. Morton always draws crowded audiences, and his lectures will be most entertaining to photographers, and alone worth coming all the way to Philadelphia to see and to hear.

On Thursday evening a grand lantern and stereopticon exhibition will be given also at the Academy of Music, the various artificial lights—electric, oxyhydrogen, magnesium, oil, and a new light by Mr. J. W.

Black of Boston—to be called in to give eclat to the occasion.

The *Exhibition* will be open day and evening for a week perhaps, and all the entertainments will be free to all the members of the Association. Fine music constantly. The Exhibition Hall is a grand one, admirably suited in every respect.

See circular, to be mailed about May 10th.

The Scovill and Holmes Medals.

THE Committee to examine applications for these medals, desiring that all who wish may compete, announce that they will receive applications until May 10th, *but no later*.

Each applicant must send specimens of his work; describe his method in detail, and make his claims plain.

Address all communications, examples, models, &c., to the undersigned.

Already several very valuable articles have been forwarded for examination and competition. Designs for the medals still solicited. Please send at once.

EDWARD L. WILSON,

Secretary.

PHILADELPHIA, PA.

PHOTOGRAPHY IN CANADA.

AFTER our visit to New Hampshire and the summit of Mt. Washington we proceeded to Montreal, in order to enjoy a little of the Canada winter. And we were fortunate in finding there yet plenty of good sleighing and skating and cold enough to prompt one to cover ears and nose when driving over those snow-banked roads or across the hushed St. Lawrence. Montreal is a merry place in winter. We stayed there four or five days and didn't see a pair of wheels all the while. Every vehicle is on *runners*, from the most stylish sleigh or characteristic hay-cart down to the tiny things used to give Young Canada its daily rations of fresh air. This, with the jingling of bells and the flying along of the conveyances (no horse ever *walks* over the snow) makes Montreal a merry city, and one can scarce feel despondent there.

Photographically, Montreal is a cheerful place too, for here are some excellent artists. Mr. Notman, whose work is familiar to our readers, still takes the lead, both as artist and photographer. His immense establishment has been entirely remodelled, enlarged and new light added since we visited him over three years ago, to accommodate the additional force necessary to carry on his growing business.

Composition pictures, such as the "Skating Carnival," given in our last December number, are in great favor here, and Mr. Notman produces some most striking ones. He also has pushed into great popularity the 8 x 10 plain photographs—which he calls "Photo-Reliefs"—and a half life size vignette, very elaborately worked up in crayon and India ink, both of which are exceedingly fine. Examples of these he will send to the Exhibition in June for us all to see. He does a great deal of colored work, employing five artists on the place and others outside, and his business in cabinets and cards is something immense. Porcelains he does not make. We do not think we saw one, either, in Canada.

Mr. Notman selects certain sizes and styles, and pushes them, rather than make such a variety, which shows that that sort of thing can be done. He has a very elegant establishment at Montreal, conducted on the best of principles for success, and he is successful. He also has branches at Halifax, St. John, Ottawa, and Toronto—Notman & Fraser—and at each branch a thriving business is done, and good work scattered far and wide, influencing others to imitate its good qualities.

Mr. Alexander Henderson also has a fine studio at Montreal, and makes excellent work. We think we have never seen a *cleaner* and neater place than his, and it is presided over by one who knows his business and who excels in it. Mr. Henderson is not only a good portrait photographer, but he pays much attention to outdoor work, some admirable examples of which he showed us and promised to send to the Exhibition.

Mr. J. Inglis is also an ambitious photographer here, whose work is full of tech-

nical excellence. He also does a large business and has recently opened a branch at Hamilton. Mr. Inglis is a hard worker, ambitious and live, and he has made wonderful progress. We found him full of business.

Mr. George Martin has charge of the stock business in this city; manufactures many of his chemicals, and sells all the novelties made and used in the United States.

We were very much interested in a visit to the large printing-house of Mr. George E. Desbarats, where photo-lithography is carried on to a considerable extent. Here the *Canadian Illustrated News* is printed, a paper similar in style to *Frank Leslie's Newspaper*. The illustrations, both from nature and reproductions, are all printed in a steam lithographic press; the stones being made by the photo-lithographic process of Mr. Leggo.

If the subject is a portrait of a living person, a negative is taken in the usual way, and all the fine lines shown in a wood-cut are etched upon the negative. The print is then made by the Leggotype process, transferred to the stone, and then printed as all other lithographs are printed. The process is a very interesting one, and we may at some future time be permitted to give our readers a more full explanation of it, together with a print thereby.

After four or five days in Montreal—days never to be forgotten—we proceeded to Toronto.

There is located the beautiful studio of Notman & Fraser, under the charge of Mr. Fraser. Excellent work is made here, and the colored work is unexcelled, Mr. Fraser himself being a splendid artist. Mr. Bruce presides at the camera, and he is a young man possessing great taste and skill, as the picture in our last November issue proves.

Messrs. Ewing & Co. also have a fine establishment here and do admirable work. Mr. McCorkindale, formerly of Quebec, has charge of the studio, while Mr. Ewing superintends the large stock trade he has built up, being the most extensively engaged of any one in that business in Canada. The establishment is a model one, and the

display is fine as one might expect from such a live embodiment of enterprise and tact as is found in Mr. Ewing.

Mr. Eli J. Palmer shares the stock trade here, but has closed his gallery. He is well known to the Canada trade.

Mr. W. O'Conner is also located here. He is a regular attendant upon the meetings of the National Photographic Association, and is a growing, enterprising artist.

We saw no snow in Toronto, but found a very fine city. From there we went to Hamilton, where we found Mr. Inglis's new branch, under charge of Mr. Jarvis, just opening.

Mr. J. M. Edy, formerly of Bradford, is also located here, and is a very promising young artist. He has just opened a very clean, pretty place, and appears to be prospering.

The stock trade here is in charge of Messrs. Duncan, Stuart & Co., who are also agents for our periodicals.

Soon after leaving Hamilton we crossed over the Niagara Suspension Bridge into our own native soil, but what we saw at Niagara and at Rochester, with Messrs. Kent, Hovey, Marks, Fox, Bradley, and so on, we must wait to give until next month.

PHOTOGRAPHIC DIALOGUES.

(SEQUEL TO "ONE HUNDRED DAYS IN A FOG.")

BY ELBERT ANDERSON,

Operator Kurtz's Gallery, 872 Broadway, N. Y.

M. I believe I understood you to say, in one of our—

A. *Pow-wows.*

M. In one of our "pow-wows," that an insufficient exposure could not be remedied by strengthening the developer.

A. Yes, I said so.

M. And I believe you further said that you keep a strong and a weak developer, which you mix together as occasion calls.

A. I said that also.

M. What then is the nature of the circumstances which require this change of developer?

A. I do not know whether you are aware of it or not, Mr. Marshall, but you have now approached a subject of the greatest

possible moment, and I advise you to listen well to what I am about to state.

M. I am all ears.

A. Most asses are, you know.

M. Well, I might easily reverse the compliment by stating: It is the *wise* who listens, and the ass who has a long tongue.

A. Here is an exception to your rule. I was one day attending a large dinner-party; my left-hand neighbor was a rather demure-looking individual, who listened most attentively to my—

M. *Chin music* (!)

A. Edifying discourse, Mr. Marshall.

M. "Edifying discourse" is good. Well, go on with your story.

A. He appeared to agree with me in my remarks, and to understand thoroughly all I said, speaking very little himself meanwhile. I began to think to myself, *this is a sensible fellow, I like him*. Well, I had arrived at the most critical part of my dissertation, and was expressing my views and laying down the law in the most earnest and emphatic manner, and at the same time I noticed an unusual excitement in my friend's face. Presently he seized me by the arm, and directing my attention—by pointing with his fork—to the waiter who appeared at this moment with a dish of apple dumplings, exclaimed aloud: "*Them's the little jokers for this chicken*" I need scarcely add, I have never forgiven him.

M. What has all this rigmarole got to do with *development*?

A. I ask your pardon; pray excuse this little divergence from the main question. Now for another experiment. I will coat this plate and expose it twenty seconds, on a certain subject, and develop with a *strong* developer, that is, strong *iron* solution.

M. This comes up very quickly.

A. I will now coat another plate and expose on the same subject the same time, twenty seconds, and develop with a *weak* solution.

M. This comes up much slower. Is this the only difference?

A. The negatives are both fixed and washed, come look at them.

M. Why bless my soul! what a difference; this one is thin and flat without much contrast, and was made with the weak

developer of course, whilst that one is strong with much more contrast, clearly showing the effect of a strong developer.

A. My friend, you are all wrong. It is just the reverse.

M. What do you mean by just the reverse?

A. The negative with these strong contrasts, was made with the *weak* developer, and the flat one was made with the strong developer.

M. Is that so? How do you explain this seeming paradox?

A. Mr. Marshall, I assure you, that when you see two such effects and opposite results produced with exactly the same exposures, it cannot but strike you most forcibly that, of all the manipulations of the negative, nothing can exceed in importance that of the development. It is the very *key* of the whole making of the negative. Talk of the *secrets* of the dark-room. THIS IS THE SECRET (!)

M. I cave.

A. I showed you some time back the *effect of strengthening* a negative. I showed you that the second development (strengthening) was *in proportion to the first deposit*, and I will now show you that the first deposit is *in proportion to the strength of the developer*.

M. I ain't sure I understand you.

A. Now listen! The stronger the developer is in *iron* (the acid being the same in both cases), the more rapid the development: this you already know; but, you may not know that with a *weak* developer the reduction is so slow that the lights (*i. e.* the most impressed parts of the plate) appropriate to themselves the silver as fast as it is reduced, and it is not until they are overcharged that the shadows "get a show;" thus the negative has strong contrasts. But with a *strong* developer the silver is reduced in sufficient quantities to supply both, the shadows as well as the lights. And if too strong, the shadows receive the deposit almost as fast as the lights, making the negative *flat*. Now you have only to still further increase the *iron*, when the reduction will take place so rapidly that the impressed image has not sufficient time to dispose of the silver, which is reduced over the whole plate.

M. Result, a healthy old fog. Why I had no idea that so much depended upon the development.

A. It is of every consequence, and here it is where you want your *wits* about you. It requires the utmost care, good taste, and judgment on the part of the operator. It is far better that you over-expose ten seconds than under-expose one-half a second. The former can, in a measure, be remedied; the latter is hopeless. I have shown that too rapid a reduction will "fog" your negative, and I shall show you later that a too *slow* development will produce the same effect.

M. Any other little suggestions on development? The smallest favors thankfully received, larger ones in proportion.

A. See, here is Miss Aurora Cynthia de Brown. I shall make two negatives of her; one in her pretty black velvet hat and feather and cloak, and the other in her white dress and laces. Now if I use the same developer in both cases, I must give twice the exposure to the black suit.

M. That's what I should have done, but gathering from what you have said just now, I suppose I had better give *nearly* the same time, and modify my developer.

A. Assuredly. In order to get fine detail in white drapery, give a full exposure and use your developer rather weak; keep your wits about you and do not over-develop; and when she sits in her black suit, strengthen your iron, and "look sharp."

M. Good; I'll try it.

A. As Miss Aurora will doubtless be some time in—

M. Setting up her rigging!

A. I will show you something else, in the

Fig. 1.



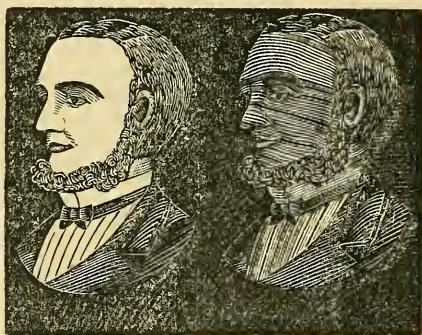
meantime, that may possibly interest you. Here is a piece of white card-board (Fig. 1),

upon which are pasted two photographic heads—of the same individual—neatly cut out of the paper upon which they were printed. As you see, they are exactly alike in every particular, with the single exception, that one is a great deal stronger than the other, or *harder* as it were. They are from the *same* plate, yet from different exposures.

M. Just so.

A. Now here is the negative, containing the two exposures, which I have covered over—the reason of which will presently appear—with a piece of *black* paper, so cut out as to allow only the two heads to be seen on the glass. (Fig. 2.)

Fig. 2.



M. Just so, also.

A. Now listen: This negative was, of course, made on the same plate of glass, same collodion, silver bath, developer, fixing, and varnish. Further, the position, quantity of light, direction of light, time of exposure, and in fact the entire manipulation, was the same all through, and the second exposure was made as rapidly as possible after the first; finally, the negative was exposed and printed exactly the same time, all the operations of washing, toning, &c., &c., the same as near as may be, and still one is stronger than the other. How do you account for this?

M. Let me see if I fully understand you. An ordinary plate is treated in the ordinary way, *i. e.*, coated, dipped, exposed on the same subject twice (by the sliding-back), same time of exposure, same light, developer, fixing, &c., &c. Yet one view is stronger than the other.

A. That's the proposition.

M. If this is a conundrum, I give it up. Perhaps you powdered his face, or strengthened one of them after development, or—

A. No, no, no. The manipulation of the plate must be considered as absolutely one single, perfect operation, and the subject taken, unchanged, and under the same illumination. How do you explain it?

M. Well, then, in the language of farderland, *Nix fore-stay*.

A. Here is the solution of the mystery.

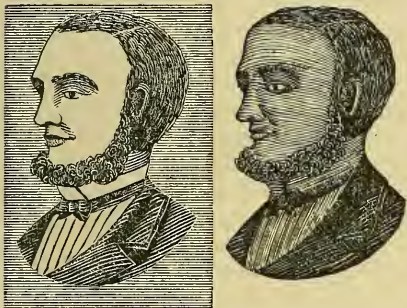
M. You are always full of mysteries.

A. Yes, my name is "Mr. E." Anderson, you know.

M. Ah! me— —. I feel better now. Go on, please.

A. I remove the black paper from the negative, *now* see if you can tell. (Fig 3)

Fig. 3.



M. Ha, ah! that's the secret!! You changed the *background* between the exposures, and the *dark* background serves by contrast to throw the figure out in stronger relief. How is it I did not think of anything so very simple?

A. Nevertheless, you are *all wrong*, Mr. Marshall.

M. Come, now, I like that—ain't I an *artist*, and every artist knows, who knows anything, that a light object on a dark ground is better contrasted than the same object on a light ground. That's the solution, depend upon it. I am somewhat surprised, I'll confess, that *you* did not know this.

A. Still, I say, you are all wrong.

M. I don't see it. Gosh darned if I do. No, sirez, horse fly.

A. Gently, gently.—I will now re-cover the negative, with the black paper; see

here. (Fig 2.) There is no *background* whatever to force out the contrast, and yet one is stronger decidedly than the other.

M. Well, I'm blamed if that ain't so. I thought I had a soft thing on you that time. How did you do it?

A. Do not take what I am about to tell you *now* for gospel, nor at any other time.

M. Make yourself easy on that score.

A. Thank you (!) You are *never* to forget that in all our conversations I only state *my own* experience. I do not for a moment presume to dictate. I think this is caused in the development, for when—

M. But you said distinctly just now, that the manipulation was absolutely uniform, and that—

A. Stop a minute, you misunderstand me. It is caused by nothing that *I* do in developing; it is caused by the force of circumstances. I have ever noticed, that in using a light background I get my picture *in less time* than when I make use of a dark one. I am not prepared to state *exactly* the reason, though I have an idea. I have further noticed, that with a dark ground I get a stronger image, chiefly, as you observed, by the contrast; but it is not of *this* that we are speaking. My theory is this: that with a light background the whole of the plate finds employment for the reduced silver, and the image gets less than if the background were dark; for in the latter case the silver would be chiefly employed in "piling up" on the image. This may all be visionary, however. [*Dear Sphinx, do you know?*] I can only exclaim with Rosa Dartle: "You know how ignorant I am, and that I only ask for information. I want to be put right, if I am wrong."

CURE FOR LEAKY SKYLIGHT.

BY GEORGE PATTON.

I HAVE been troubled more or less with a leaky skylight, until one day it occurred to me to try an experiment, which has proven a perfect success. I poured melted paraffine into the interstices, between the sash-frame and the glass, and I assure you water no longer intrudes upon me from above.

READING, PA.



ALL persons are entitled to ask and answer questions in this column. Please always be as brief as is consistent.

Answers.

2. Use a very weak developer and thin collodion.

3. Why, try again. *Sometimes* (you must admit) that a customer has good cause for objecting. Submit to anything reasonable, though it *may* be hard sometimes, and you will gain by it in the end. I have often made staunch friends by sitting a person over and showing them how much *worse* they may look than in the photograph they object to.—JUSTITIA.

4. Let it hang until *surface* dry, then lay it between sheets of blotting-paper until quite dry.

6. Under-exposure itself will cause the trouble, and also an unclean plate.

St. Clair photographer to St. Clair artist, greeting:

To get purple tones:

1.

Dentist's Waste Gold, . . .	3 dwt.
Nitric Acid, C. P., . . .	30 minims.
Hydrochloric acid, C. P., . . .	60 "

Digest in a warm place until the acid is saturated with gold.

2.

Take of the above saturated solution, 20 minims.
Soft Water, in G. S. bottle, . . . 10 ounces.

And label it Stock Gold solution.

3.

Acetate of Soda, . . .	100 grains.
Soft Water, . . .	10 ounces.
Stock Gold solution, . . .	1 ounce.

This is for a new toning bath; after it has been used put it aside until wanted,

then measure out 8 ounces and add $\frac{1}{2}$ an ounce of stock gold solution. If acid, neutralize with a saturated solution of bicarbonate of soda. This will tone three sheets of paper,—120 cartes.

4.

Hyposulphate Soda, . . .	4 ounces.
Soft Water, . . .	24 "

Directions.—Thoroughly wash the prints in soft water, adding a pinch of salt to the last water. Tone to the desired tint and pass the prints *directly into the fixing solution, without washing after toning*; if warm brown tones are desired, *return the prints after toning to the salted water*. Ten minutes in warm weather, fifteen in cold, is long enough in the fixing solution. By leaving the prints longer in the fixing solution, any depth of black may be obtained; they should be moved about while fixing, to insure an even color. To prevent mixing the toning and fixing baths, handle the prints, while toning, with the right hand, while fixing with the left, or *vice versa*.—ST. PAUL, MINN.

7. Best Gum Arabic, 2 oz.; water, 4 oz.; white sugar, $\frac{1}{2}$ oz., with a drop of carbolic acid added, will answer nicely for sticking-paper for ferrotypes. Use warm water and filter.

QUERIES.

1. What is the best formula for salting and sensitizing plain paper? *I don't know.*

2. Which is the best, iodide of potassium or ammonium, for iodizing the nitrate bath. If the latter is used in the collodion, why not in the bath?—FRANK B.

3. C. M. F. says the "specs" he complained of a few Sphynx's ago are "red, hard-looking, and give the appearance of the background to the picture. Only excessive fuming seems to banish them. They appear as soon as the image begins to appear. Can any one help him out of his trouble?

4. Why do makers of varnish, &c., label over the whole bottle, so one cannot see the
SEDIMENT?

5. Why do my negatives, after being intensified with permanganate of potash, lose

their intensity again on the application of the varnish?—CARSON.

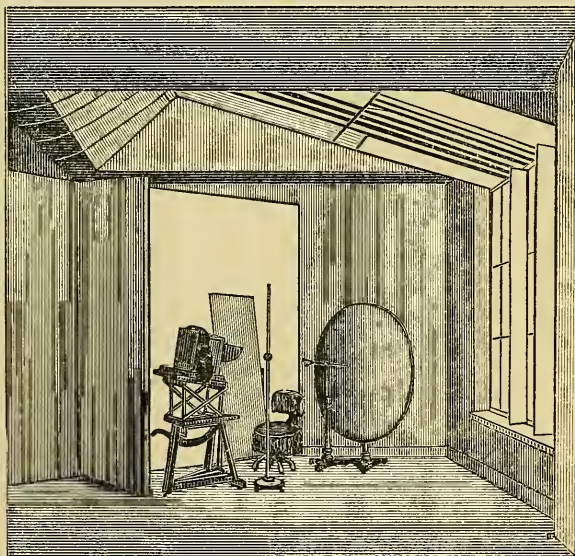
OUR PICTURE.

WE present our readers this month with what we have often been asked for, and what we have not often given, namely, "some specimens of real good card work." Through the kindness of Mr. John A. Scholten, corner Fifth and Olive Streets, St. Louis, Mo., we are now enabled to do this. We have long known of Mr. Scholten's success in making pictures of children and have often coveted some of his negatives for our purpose, but the difficulty of getting a *number* of negatives of one (child) subject is so great, that we have at last determined to wait no longer but to accept of Mr. Scholten's kind offer of *several* of his negatives and go ahead with printing them. Upon acquainting him with our determination, he promptly selected twenty negatives from his daily work and sent them on. The prints from these are before you. We put two subjects in each number, so there are at least ten varieties, and there will be the same number but *different* ones in an early issue of the *World*.

We have asked Mr. Scholten for some information concerning his method of taking the little ones, his skylight, &c., and we append his answer:

"DEAR SIR: In answer to your complimentary request of the 20th inst., in which you write in such flattering terms of the photographs of children which I sent you as a contribution for the 'Journals of Art,' of which you are the editor, and in which you request me to write an article for your Journals on the taking of children's pictures, and also my 'formulæ,' I will endeavor to make a few remarks, with scarce the hope, however, of their being instrumental in the enlightenment of any one. My method of taking children's photo-

graphs is very simple; the first and most essential requisite being *PATIENCE* coupled with good humor, or at least a *SEEMING* good humor. Add to these prerequisites, good assistants, good lights, good chemicals, and good artists, and you have my secret, if such you choose to term it, of taking pictures of children. One of the lights which I use is a south light, and is peculiarly adapted to the taking of children's pictures, it being covered with fluted glass, and well supplied with screens, which enable me to throw on or shut off the light almost instantaneously in any quantity to suit the subject. I have, with the assistance of these essentials, taken more than twenty children in one day, besides other work as it chanced to come in. I make it a rule to have two plates always ready when taking children, which enable me to make four impressions of the child; one of which is



almost sure to be a good one. This is my simple way of *TAKING* pictures of the little ones, and good artists complete the work so simply begun.

My formulæ are the same as I have used for the last six years, being the same as those published in your Journal, one of which was given by Mr. Hugh O'Neill, and which I have used with satisfactory success; and the other was recommended by Messrs. Lœscher & Petsch, of Berlin.

The most successful collodion I ever used was made with papyroxyline.

I send you a photograph of the interior of my skylight, showing the south inclination, together with some of the backgrounds, screens, &c., which I use; on the north side, at the other end of the room, I have another light same as this. I have no particular position in which to place my camera, but work all around the light, as may best suit the subject. In taking photographs of children I use a $\frac{2}{3}$ "quick-worker lens," made by Mr. Usner, of New York. The photograph will show you what pattern of backgrounds I use; the one I use generally in taking Rembrandts being the concavo-convex, the concave side of which is next the subject. I also have one of Bigelow's Revolving Backgrounds, which I use also.

Some photographers don't like a south light; but I make most of my large work

under the south light, 11-14, 14-17, 16-20 sizes; besides, I work this light almost exclusively for children, though when busy I have to work both lights. I will show you some of my work when I come on, at the Exhibition. I also send you a crude sketch of my reception-room and operating-room, with adjoining rooms, as finishing-rooms, dressing-rooms, &c. Our friend Benecke is going to take me a stereoscopic picture of my reception-room, which I will send you. About one-half the wall surface in my reception-room is hung with pictures, the other half being furnished with show-cases, which are kept well filled with choice velvet, gilt, and walnut frames, cases, stands, &c. In addition to these side show cases I have three large centre cases, in the centre of the room, for fine velvet goods, which give me the facility of showing to my customers, without trouble of overhauling goods, about fifteen thousand dollars worth of fine goods at a glance. I also have a large commodious garret for printing, and a cellar for washing.

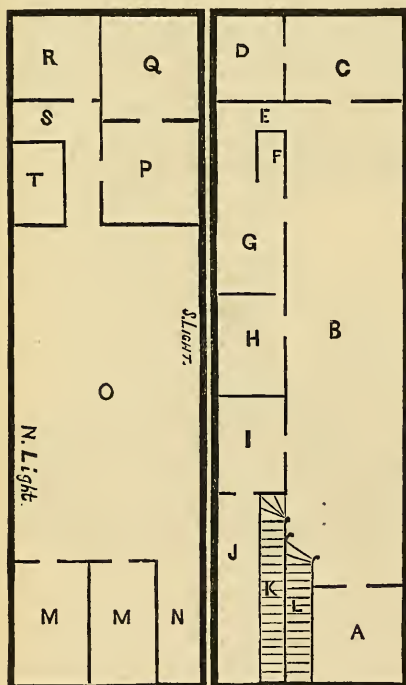
My reception-room is 110 feet long by 25 feet wide; operating-room 60 feet, by 25 wide.

I am delighted with the printing of my pictures you sampled me, as well as with the style of mounting. Tell Mr. Rhoads that when I go East in June, I will thank him personally."

Our readers will see by this that Mr. Scholten has a magnificent establishment, and that he can produce the best of work in it.

Since he has been pleased to allude to the mounts we have used, in response to advance copies sent him, we must not forget to call our readers' attention to the fact that these are *American* mounts, designed and made in our own city by Messrs. A. M. Collins, Son & Co. We emphasize *American* because, heretofore, many have thought that first-class ornamental cards could not be procured without sending to Paris for them. We think these will convince any one that such articles, superior to anything foreign, can now be had of our own home manufacture.

We have several other very beautiful styles to present in our next and following numbers, which we hope will be carefully



A, Office; B, Reception-room; C, Studio; D, Ladies' Toilet; E, Stairway; G, Frame-room; H, Mounting-room; I, Dressing-room; J, Ladies' Cabinet; K, Stairway from street; L, Stairway to Studio, from B; M and M, Dark-rooms; N, Entry; O, Operating-room; P, Chemical-room; Q, Artist's room; R, Room for burning in enamels; S, Stairs to Printing-rooms; T, Stairway.

examined. *Any* design will now be gotten up by these gentlemen, or by your stock-dealer, to suit the tastes of the most fastidious.

The prints were made by Mr. William H. Rhoads, of Philadelphia, on Mr. D. Hovey's "Great American" Albumen Paper. Mr. Hovey's paper, as our readers know, is unsurpassed by any other, and now the

warm weather is coming it will be found particularly advantageous to use it. We recently visited Mr. Hovey's manufactory, and found it a model of cleanliness, system, &c., and fully occupied with all his large force in the production of the clean, white, beautiful sheets, of the only Hovey's "Great American" Albumen Paper. We commend it to all who can appreciate a good article.

Editor's Table.

THE *Photographic World* for April contains a beautiful Cabinet Photograph of a lady, by Mr. F. Grasshoff, Berlin, Prussia, and the following articles: Photography Abroad; Photographing Rounded Surfaces; Reducing Silver from Old Baths; Ammonium, &c.; Caution Against Insufficient Washing of the Negative; Blue Frosting; Important Printing Process; Preparation of Chalk Paper; The Victoria Card; Weak Developer; A New Sensitive Agent; The Studio, by Bumble Buzz, with drawings for Skylight; On a Convenient way of Preparing Collodio-Chloride; Notes In and Out of the Studio; Reed's Improved Printing frame; The Solar Camera Disclaimer; Proceedings of the Hypo Club—full of excellent hints; The Causes which Affect the Permanency of Silver Prints; German Photographers' Society, New York; Chicago Photographic Association; Photography for Boys; Our Profession; On Printing from Stereoscopic Negatives without Cutting; Good Advice; Arrangements for the Exhibition; Splashes of Silver; Little Dodges (excellent); Short Photographic Sermons (Thomas); Measles; Retouching the Negative; Position and Composition, with fine illustrations; Our Picture; All the World Over; News from all parts of the World; Table Talk; Some One to Teach Us; Quality not Quantity, and Editor's Table. Altogether an admirable number. Sent prepaid for 50 cents, or three numbers for \$1 to our subscribers.

THE PHOTOGRAPHER TO HIS PATRONS.—This is the title of a little eight-page pamphlet which we are issuing to save the time of the photographer. We print it on pretty tinted paper in beautiful type, and offer it to photographers to give to their patrons. The contents first explains the intention of the book; then 2. An appeal for photographers and their art (and then as to having pictures taken); 3. *When to come*; 4. *How to come*; 5. *How to dress*; 6. *How to Behave*; 7. *The children*; 8. *Business*; 9.

Frames; 10. *Copying*; 11. *Coloring*; 12. *Prices*. All this we inclose in a cover, and on that cover we put the advertisement, list of prices, &c., of the photographer who orders them.

Some who have seen them write, viz.:

"I want 5000 at once. I think it an excellent advertising medium. Also send me 2000 in German." J. A. SCHOLTEN, St. Louis.

"Let me have a lot as soon as printed."

J. F. RYDER, Cleveland, Ohio.

"A grand idea. Mr. Kurtz will add a few newspaper testimonials and order a lot at once."

ELBERT ANDERSON, Kurtz's Studio, N. Y.

"A splendid medium for educating 'skulls' that cannot think and will not learn."

W. H. WHITEHEAD, Pittsburg, Pa.

"A capital thing. Send me 5000."

A. BOGARDUS, New York.

We had no idea of the success of our little *brochure* when we wrote it. We offer it to everybody, and will send samples and prices to all applicants. Parties desiring additions or alterations can have them at a small advance on the usual price. Send for sample.

ON MT. WASHINGTON.—Mr. B. W. Kilburn, Kilburn, Bros., Littleton, N. H., has returned from his sojourn on Mt. Washington, and as the reward of his labor, has a quantity of admirable negatives of beautiful frost-work, of the buildings, &c. They were secured by hard labor, but we cannot see that the *quality of the work* differs at all from Mr. Kilburn's very best taken under the most favorable circumstances. They are views such as few men see in nature, and will prove a valuable addition to his large variety.

PICTURES ON MT. ETNA BY DR. VOGEL.—Dr. Vogel has kindly sent us a picture of the December total eclipse and a number of stereo and 5 x 8 pictures made by him during his recent journey to Mt. Etna. They include portraits of the English expedition; Profs. Roscoe, Lockyer,

and others; views of the craters of Mt. Etna; a view of Catania, Italy, with Mt. Etna in the distance, and one of the vessel on which they were wrecked. Dr. Vogel used his 5 x 8 Philadelphia stereo box, made by the American Optical Co., N. Y., and presented to him by the Scovill Manufacturing Co. Dr. Vogel being an excellent photographer of course his views are excellent as well as most interesting.

Mr. G. A. Douglass, the able Secretary of the Chicago Photographic Association, and for a number of years with Mr. C. W. Stevens, has been admitted by Mr. Stevens to an interest in his business, Mr. Douglass specially superintending the apparatus, the chemical department and the correspondence. Although Mr. Douglass is a young man, he has had fifteen years' experience, and besides is worthy of due patronage. We commend him to those who do not know him.

THE article on page 104 of our last number by Mr. Shoemaker, on Making Solar Negatives, is being published by Mr. Albert Moore in pamphlet form. A good idea.

READ AND REMEMBER.—We are preparing to give our readers prints by the following artists: Gihon & Thompson, Philadelphia; J. H. Kent, Rochester, N. Y.; W. H. Whitehead, Pittsburg; J. Landy, Cincinnati; N. S. Jacoby, Minneapolis, Minn.; G. F. E. Pearsall, Brooklyn, N. Y.; H. Roher, Chicago, and W. J. Baker, Buffalo, N. Y., besides foreign novelties. Take the *World* and secure them all.

IN our report of the Solar Camera Case last month, fifth line of the examiner's report, for the word "*condemned*," read *considered*, the latter being correct.

A NEW CURTAIN.—Mr. L. G. Bigelow is at work perfecting a very beautiful and effective curtain, which our readers will be duly apprized of. It will be low in price too. Send for photograph.

"GRISWOLD'S COMPOSITIONS" is the title given by Mr. M. M. Griswold, Lancaster, Ohio, to a series of excellent stereo groups he is publishing. Mr. Griswold is an artist, as his well-known "Blowing Bubbles" decided him, and his stereos show true feeling as well as much skill, though taken in "a little bit of a country light." We hope to see him soon working in a larger one. Among the best of the stereos before us are, "Unveiling a statue of Young America,"—a (Vinnie) Ream-arkable sculptural picture; "Beatrice Shoo Fly;" "The Picture-Book;" "The Sunbeam Fairy;" "Let us have Piece;" "Young America as an Artist," and so on.

RECEIVED.—Mr. Wellington Watson (Grelling's gallery, Detroit) has favored us with a number of examples of his recent work, which show a skilful photographer and a rapidly growing artist. In criticizing Mr. Watson's work heretofore we have had to call his attention to the desirability of *pictorial effect* in his pictures, and these show that he has heeded our remarks. We think that he has wonderfully improved the lighting of his subjects and with a little more exposure in most cases, his work will stand very high. Mr. E. L. Willis, Milford, Mass., has sent us a double picture of a sweet little missie; one image being printed from the negative in the usual way and the other with the negative reversed, both on the same sheet, and consequently facing each other. The effect is very pretty. Mr. Harry Gurlitz, Sparta, Kentucky, has our thanks for some cartes, and among others, one of the great "Kentucky Egg Sucker." Messrs. Charles T. White & Co., New York, have sent us their quarterly price list. Mr. I. S. Chandlee, photographer at the Bridesburg Manufacturing Co.'s Works, has sent us a very excellent photograph of the new compound propeller pump, showing good photographic work.

A BEAUTIFUL VARNISH.—Mr. Henry Happel, of the firm of W. H. Mardock & Co., has sent us some very beautiful ferrotypes, made by Messrs. Golden & Robinson, the great charm of which is in their warm roseate tone or color. Contrasted with ordinary ferrotypes, they certainly decide the preference for them. This great advantage is secured by a varnish invented and patented by Mr. Happel, and which Messrs. W. H. Mardock & Co. offer to the trade. We commend it as a very beautiful and great improvement. It does not injure the whites of the picture, and is applied just like any other varnish.

ZEBRA CARDS AND ADVERTISEMENTS.—We call the especial attention of advertisers and photographers to our illuminated advertisements, as shown in the page devoted to Dr. Vogel's new book. These are our own style, and produced by no one else. All the colors are printed in one operation by a process of our own, as detailed on the back of the advertisement, which please see. Advertisers wishing display advertisements in this style in our June number should apply at once. We supply business cards of this style also, many colors and varieties, at \$10 for the first thousand, and \$6 for each additional thousand. Send for samples. Circulars, show cards, &c., in *Zebra* style at reasonable prices.



Boston Public Library.

J. H. KENT,

ROCHESTER, N. Y.

T H E

Philadelphia Photographer.

Vol. VIII.

JUNE, 1871.

No. 90.

Entered according to Act of Congress, in the year 1871,
By BENERMAN & WILSON,
In the office of the Librarian of Congress, at Washington, D. C.

THE EXHIBITION.

WE issue our current number a little earlier than usual, in order that our readers may have the time to see the latest news pertaining to the Exhibition and meetings of the National Photographic Association before they leave home to visit them. Please read further in the National Photographic Association Gossip, and also notice the additional railroad arrangements.

On May 12th we issued a circular to every one whose address we could find, and also distributed them among the dealers all over the country. This circular gives all the necessary information pertaining to the arrangements of the week; the hotel accommodations; the schedule of rates for travel here and home again, and so on.

If your copy has not reached you, we will be glad to send another one.

Permit us now to express the unusual pleasure we have in bidding you all a welcome to our own city. It has always been a pleasure to attend upon the meetings of the National Photographic Association, but we look forth to the *grand annual this year* with peculiar pleasure because it is to occur at our own home. We have, in connection with our excellent Local Secretary, Mr. Rhoads, tried to leave nothing undone which could be done to make your visit here cost you as little as possible, and to

make it repay you as many fold as possible for coming. We have announced the programme, but there are yet pleasures in store for you which we cannot tell you of now. Only come, and you will be glad and repaid. Our *Philadelphia* photographers stand awaiting your visit with warm hearts and strong arms to welcome you. We hope to see you here in large numbers, and to shake every one of you by the hand.

THE PHOTOGRAPHIC WORLD.

PLEASE read our special circular accompanying our April number, and headed *The Photographic World*.

As an appendix to it, we add some extracts from letters we have received since.

Mr. Wm. H. Rulofson, San Francisco, Cal. (whose face none who saw him at Cleveland will ever forget), says: "I am much pleased with the *World*. Between the two Journals, we will no doubt be well informed of all matters pertaining to our art. I am gratified to see such a growing interest in the literature of photography."

The "literature of photography" is the *life* of photography, and the better the first is supported, the better will the latter grow.

Mr. T. J. R. Keenan, of Mississippi, sends us a long list of names of photographers, and says: "For the sake of the reputation of our beautiful art send them

all a copy. It will knock old fogysim glimmering out of them, I am sure."

In the South is where we want our magazines to circulate, and we will thank and repay any of our Southern friends for lists of names.

Mr. J. R. Schorb, of South Carolina, says: "I know that the circulation of your Journals will be conducive to the advancement of all who take it, and I shall therefore do all I can for both. Even a selfish consideration ought to induce every *present* subscriber to make effort to increase your list, for it is evident that the more subscribers you have, the more time and the more money you can expend upon your publications. I am sure, if any photographer will become a subscriber, he will deprive himself of many conveniences rather than discontinue, and I cannot see how any country artist, who knows that such publications can be had so reasonably, is willing to be without them. I would as soon try to do without a newspaper."

We hope such excellent doctrine as Mr. Schorb gives may be widely believed and practiced. It is safe and good.

Mr. Nason, of Cleveland, says: "The *Photographer* and *World* arrive in time, and are correct. Give us a solid bottom semi-monthly *between* the two, and reckon on me as a subscriber. Fifteen long days is fourteen days too long for me to wait, for my appetite for *such good works* is in that fearful condition that I really need a new *World* (Photographic) to digest every night."

We hope Mr. Nason *does* digest all he takes in, for it is what you digest, and *not* what you take in that does you good.

Mr. Charles T. Zimmerman, whose excellent landscape picture was in the April *Philadelphia Photographer*, says: "Both your Journals are eagerly looked for, and I sincerely hope the *World* will be as great a success as the *Photographer*. It would indeed be difficult to overrate the amount of good the latter has done. To photographers distant from the large cities it brings specimens of the very best class of work, the great variety never allowing the interest to flag for a moment. It is true, there were

other and older Journals, but one without a specimen photograph is like "all theory and no practice."

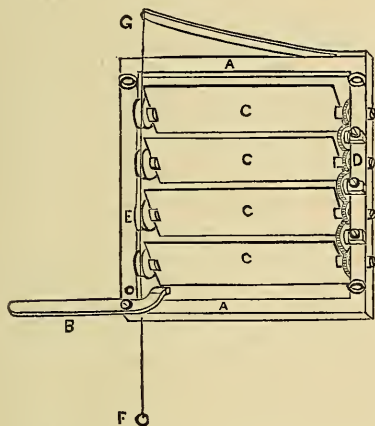
We hope our readers will do all they can towards the circulation of our publications. It will be seen that *we make a special offer of Dr. Vogel's new work as a premium for new subscribers*, and we trust the demand on us will be large.

A RAPID EXPOSING SHUTTER.

BY JOHN C. BROWNE.

CONSIDERABLE ingenuity has been displayed by photographers upon the subject of instantaneous shutters, and some of the devices used for giving the sensitive plate a very short exposure are quite elaborate, allowing ample scope for nice mechanical work in their manufacture. At the April meeting of the Philadelphia Photographic Society, a form of shutter was exhibited, designed by Prof. Fairman Rogers, and constructed for him by Mr. Joseph Zentmayer, of Philadelphia. So far as I know to the contrary, this idea as applied to a shutter for a photographic lens is a novelty, and deserves some notice. The principle is a very simple one, being similar to that of a venetian shutter. The frame is made of brass on which are placed four rotating slats, geared at one end by toothed wheels, so as to turn accurately together; on the opposite side is a cord wound around and fastened to the axis of the lower slat only, and extending to a spring at the upper part of the frame; at the lower edge is the trigger. A small piece of wood is cut to fit exactly the front of the lens, and the brass frame with the slats attached is screwed to it. The focussing is done by opening the slats and allowing the light to enter the camera. When a rapid exposure is required, draw down the cord, which will cause the spring to bend, and when the slats are entirely closed, the trigger will catch upon the lowest one holding them all in position. The sensitive plate is placed in the camera, the dark-slide drawn, and, at the desired moment, the trigger is touched, the position of the slats changed, the light passes into the camera for an instant and then closes again, being held in position by

the spring on the top, drawing the cord tight and preventing the slats falling back, and light again entering the camera.



A, A, the wood; B, the trigger; C, C, C, C, the slats; D, the cogged wheels; G, the spring. It might be supposed that during exposure lines would appear upon the plate corresponding to the four slats revolving before the lens, but such is not the case; the slats are made of very thin brass, turn with great rapidity, and are not in the focus of the lens. I am not prepared at present to advocate the use of this shutter for instantaneous work, having had very little opportunity for trying its merits. The time of exposure is more rapid than with my drop, described in the *Philadelphia Photographer*, vol. iv, page 61. Prof. Rogers, after some consideration, selected this form of shutter for the purpose of photographing horses when in rapid motion, and is so far pleased with it.

TESTS

FOR THE PURITY OF PHOTOGRAPHIC CHEMICALS.

BY PROFESSOR J. TOWLER, M.D.

(Continued from page 49.)

No. II.

TESTING COLLODION.

WHAT photographer is there that has not at one time or another desired to know the composition of a certain collodion, whether it contained a chloride, a bromide, or simply an iodide? We know that such a desire has frequently been entertained; and, fur-

thermore, that photographers as a class now are much more intelligent at the present date than they were some five or six years back, and are continually yearning for further advancement in their art, and more extensive educational development.

Collodion is the subject of our present discussion, and we propose to show how to deal with it, in order to ascertain its composition.

The first thing to be done is to precipitate the pyroxyline. This is effected by mixing with the collodion an equal volume of rain or distilled water, which, thus diluting the alcohol and ether, renders them incapable of holding the cotton in solution; that is, the latter is precipitated as a white, apparently fibrous substance, resembling the cotton originally used. Now, when inorganic substances are thrown down from their solutions, the precipitates are in many instances in a crystallized condition. Take, as an example, a solution of chloride of calcium and mix with it a solution of oxalate of ammonia. The resulting precipitate is in the form of fine granular crystals, of an octahedral shape. The crystals have always this shape. The precipitated iodide of lead, when dissolved in hot water, is again precipitated, as the water cools, in beautiful golden spangles, which are quite characteristic of the substance; and thus we have in this department of chemistry a number of precipitates beautifully and definitely characterized by their crystalline shapes when examined with the microscope.

In like manner, seeing the fibrous precipitate which is produced when water is added to collodion, it was supposed that organic materials, when precipitated from their solutions, returned to their original forms; as, for instance, blood into fibrin, and pyroxyline, held in solution by alcohol and ether, again into cotton. Thus making a complete analogy between organic and inorganic materials. This would be a beautiful theory if it really existed; and we might expect to precipitate a *cow* from a few hundred pounds of milk, instead of only a lump of cheese. The theory, however, is only apparent; it is mere speculation.

The white, fibrous substance precipitated in the collodion, is separated from the liquid

part by filtration. As soon as all the liquid portion has passed through the filter, the precipitate on the filter is well washed with distilled water, which is simply poured upon it and caused to pass through the filter to the other liquid. The part that has thus been washed is the original pyroxyline, the soluble cotton. Its weight, when dry, ought to be equal to that employed in the preparation of the collodion; thus, if you are experimenting with two ounces of collodion, and have obtained by precipitation, washing, and drying, twelve grains of substance on the filter, you naturally conclude that the collodion in question contained originally six grains of cotton to the ounce.

We will now proceed with our analysis.

The liquid portion, that is, the filtrate, is placed in a retort connected with a receiver, and submitted to distillation at a very low temperature; that is, at about 120° F. This is effected by heating a large evaporating dish containing water over a flame or charcoal fire, taking care not to make the water boil. Into this hot water the globe of the retort is lowered a short distance, but not until it comes in contact with the bottom of the dish. The temperature may be regulated and kept down by lowering the dish of hot water, and thus exposing more of the retort to the cool air. The lower the temperature the better, as long as vapor is condensed; for vapor that passes at this low temperature is mostly that of ether. As soon as this ceases, cause the water in the dish to nearly boil, when it will be observed that vapor again passes over and is condensed. Collect this in a separate vessel; for this is, in a great measure, alcohol. Continue the distillation in this way, taking care not to allow the water in the dish to boil as long as vapor is condensed at this temperature. The quantities of fluid obtained by the two separate distillations will give a rough estimate of the amount of ether and alcohol in the collodion sufficiently accurate for the purposes, although far from being absolutely accurate for a critical analysis. There is a nicety in regulating the temperature by the method recommended, which can be learned only by practice; and on this nicety of manipulation depends the accuracy of the comparative

quantities of the three fluids thus separated.

Finally, when no more fluid is obtained by distillation over the water bath, remove the latter and apply heat directly to the bulb of the retort, either by a spirit flame or a charcoal fire; the latter is preferable. As the object in the present case is to evaporate the remaining fluid (water) to dryness, it is better to empty the contents of the retort into an evaporating dish, and then to place the latter over the fire, and to continue the evaporation in this way, at a gentle heat, until all the fluid has gradually disappeared. The residue, adhering to the sides of the dish, is removed by a bone spatula, collected and weighed. The weight obtained, is that of the combined salts used in preparing the collodion. These salts may be a mixture of an iodide and bromide, or of an oxide, bromide, and chloride; or the salt may be, as before stated, simply an iodide.

In the first place, however, it will be well to ascertain the base or bases of the salts.

Let us see, first of all, whether an ammoniacal salt is present.

Take a small quantity of the powder collected from the dish, and mix it with a little caustic potassa, then rub the mixture together with a drop of water in a mortar; the smell of ammonia will be quite distinct if any salt of ammonia has been used.

Test next for the presence of cadmium. To do this we dissolve a little of the powder in distilled water, and to the solution, add a drop or two of sulphide of ammonium; a beautiful yellow precipitate will indicate the presence of a cadmium, and the presence of this metal will be corroborated, if the yellow precipitate is insoluble in a large quantity of sulphide of ammonium.

In order to ascertain the presence of potassium, sodium, or lithium, we proceed as follows:

Dissolve a portion of the powder in distilled water, and then add to the solution sulphide of ammonium, until all the cadmium is precipitated, a sulphide of cadmium; separate this by filtration, and concentrate the filtrate, that is, the solution, and add to it hydrochloric acid, which will decompose the iodides and bromides; evaporate to dry-

ness, and then fuse the salt. We shall now have the chlorides of the bases that may be present.

Reduce the chlorides to a fine powder in a mortar, and then place the powder in an evaporating dish, and dry the powder again thoroughly; now add a mixture of equal parts of the strongest alcohol and ether, to the dry powder, and set the vessel aside for a day or two to digest, stirring the mixture occasionally. By this means the chloride of lithium is dissolved, and will be found in the alcoholic solution. Evaporate this solution to dryness; the residue (if any) will be chloride of lithium; moisten a piece of platinum and then dip it into the powdered chloride of lithium, and heat the salt in the blow-pipe flame—a bright crimson-colored flame shows the presence of lithium. By careful manipulation and continued digestion in the mixture of alcohol and ether, the whole of the lithium can thus be separated, weighed, and computed either as iodide or bromide.

If, however, we find no lithium salt in the alcoholic solution, we must proceed to the undissolved residue and search for either potassa or soda, or both.

This residue is already in the form of chloride, having been reduced to this state by hydrochloric acid and heat. Dry the residue and weigh it.

Our next step is to separate the potassium salt from the sodium salt, to do which proceed as follows:

Dissolve the residue in a small quantity of distilled water, and then add to the solution an excess of a concentrated neutral solution of bichloride of platinum, in distilled water, and concentrate the mixture still more by evaporation, nearly to dryness; afterwards digest the nearly dry substance in alcohol, sp. gr. .86 deg. F. for a few hours, stirring frequently. In this way the potassium salt can be entirely separated by precipitation, as the double chloride of platinum and potassium, from which the amount of the potassium salt as iodide or bromide can be computed; the double salt of sodium and platinum will be found in the solution; therefore, evaporate the solution to dryness, weigh the residue, and compute the amount of iodide or bro-

midide accordingly. If there is no residue, there had consequently no sodium salt been used in the preparation of the collodion.

Either of these two double salts can be decomposed by hydrosulphuric acid, which precipitate the platinum as sulphide of platinum, which is separated by filtration; the filtrate is then evaporated to dryness and heated to redness in a porcelain crucible; the residue, after ignition, is either caustic soda or potassa, as the case may be.

We have now to proceed to the determination of the hydriodic, hydrobromic, and hydrochloric acids, which may be combined with the bases found.

Supposing that all these acids are present in combination in the residue obtained after the separation of the gun-cotton, the ether, and the alcohol, and the evaporation of the aqueous solution to dryness, dissolve this residue and add to it a sufficient quantity of a solution of protochloride of palladium, which throws down a deep brown-black colored precipitate of protiodide of palladium, if there is any iodine in the compound; from the weight of the carefully dried precipitate, the amount of hydriodic acid is computed, as also that of the iodide, either of potassium, sodium, ammonium, or lithium, as the case may be.

The liquid portion, that is, the filtrate, contains the bromides and the chlorides, if present at all.

Add to the solution nitrate of silver, which throws down the bromide and the chloride of silver. Wash the precipitate well in the dark or yellow room, dry it, fuse it, and weigh it. The next step is to place the fused mass in a small bulb in the middle of a glass tube; the tube and its contents are also carefully weighed. Dry chlorine gas is now passed for some time over the bromide and chloride in the bulb, which is heated to redness; the chlorine displaces the bromine, which latter is driven off by the heat. After this operation the bulb-tube and its contents are again weighed, the difference between the present weight and the first weight, will be the difference that arises, by converting the bromide into a chloride. Then by comparing the equivalent of bromide and chloride of silver, and making a proportion with the

difference thus found, we obtain the quantity of bromide of silver which has been converted into chloride of silver; if it turns out that the whole mass in the bulb has thus been converted into chloride, it shows that there is no chloride in the collodion.

If a chloride should happen to be present, then it is possible that magnesia may be found as one of the bases.

There is a certainty and beauty in all these reactions, that render the practice of analytical chemistry quite enchanting; and since this practice is prosecuted with materials which make but little show, the expense is, comparatively speaking, small. The difference between *flashy* chemistry and *practical* chemistry; the one aims to astound with explosions and dazzle with brilliant colors, whilst the other aims to be useful by eliciting practical truths—the latter is that which the photographer must study and put into practice.

UNDER THE SKYLIGHT.

BY ROLAND VANWEIKE.

No. VIII.

PECULIARITIES OF FACES.

"THAT's just what I want to know about. I've noticed a good deal of difference in faces, and thought I'd like to know how to get at the best view in every case."

The *best* view, in every case, Focus, cannot be had by any rule that may be laid down, or by any instruction I may give you; but the faculty that will enable you to arrive at it the most readily, is only acquired by study and experience; yet I hope in this lesson to give you a few hints that will assist you somewhat in practice.

"Well, every little helps, and I may learn some things that it would take me a long time to discover alone."

That is very true, Focus, and there is many a hard-working photographer to-day that is plodding along under difficulties, and working at disadvantage, who would make rapid strides of improvement if a little *light* were given him by some good friend, or he studied a little more closely the photographic literature of the day.

"Are there any photographers that don't take the Journal?"

I presume so; many think they can't afford it, and the fact that they turn round in their own little pool all their days, knowing nothing of what is going on in the world about them, and the improvements that are being made, is the very reason why they are always behind the times, and cannot afford to take a Photographic journal.

"Well, how about the faces?"

O yes, we are digressing, and I will return to the subject before us. The peculiarities of faces are what we want to consider, and may be summed up somewhat as follows: Thin face with high cheek-bones; retreating forehead and prominent nose; crooked nose—generally two noses; pug nose; turn-up nose; large mouth; large ears; staring eyes; weak and squinting eyes; cross eyes; sunken eyes; very light eyes with sunburnt face; retreating chin; long neck; these are some of the more prominent peculiarities we meet with, that require special treatment.

"Don't mention any more; I am afraid I shall never learn them all."

O, don't be discouraged, Focus, you are getting along well, and you will know all about these before you are aware of it.

"Well, what do you mean by special treatment?"

Why, treatment that is peculiarly applicable to a certain subject, and not adapted to certain others. For instance, take a thin face, hollow cheeks, with high cheek-bones, and you will see the effect of different positions. Sit such a subject with what we call about a three-quarter view of the face, and mark the effect. The hollow of the cheek is defined almost to exaggeration, giving particular prominence to the cheek-bone, and the angular line of the lower jaw and chin. This view we should say was decidedly unfavorable. Now, a view one way or the other from this will be better adapted to the subject. Something towards the profile gives rather too much prominence to the nose and chin, though there are many faces of this character in which those members are less conspicuous, that take this view better than any other. Now turn this face well to the front,—not so much, however, as to give prominence to the farther ear,—

and see how much more favorable a view we have than either of the others. The hollow cheek is quite lost on the shadow side, the outline being caught on the more regular part of the face in a line drawn between the cheek and ear, the prominence of the nose and chin are softened, and the deep set eyes that before were almost lost in shadow, are wonderfully improved.

"Why, I didn't think a little change in the position would make all that difference."

Well, you see it is so, and you see also how necessary it is that great care should be taken in selecting the best view. We see many faces of this kind, that at first glance seem to be made up of angles and hard lines; but when we come to move around the subject, we soon discover a particular view that seems to blend the refractory lines, and gives a contour of the head and face that is really pleasing compared with any other view we can find.

"But I should think it would take too much time to study out the best points in a sitter when you are in a hurry."

We should try and get along, Focus, without hurrying; or however fast you may work, try and not appear to your sitter to be hurrying. But there is generally time enough for our purpose, after we become a little educated to it, if we make good use of it. From the moment you put your eyes on your subject, don't cease to speculate until you have decided which is the best view and light to place him in. The latter point is to be decided first; and the first glance you get at your subject will settle this. You first see whether he has a thin or a round face, whether light or dark complexion. Then while you are placing the chair, arranging the position, and locating the camera, you have an opportunity of going all round the subject, and catching views from all points.

"Well, that keeps a fellow's thoughts busy as well as his hands."

That's it, Focus, precisely. The photographer that *goes ahead* keeps his wits at work, and his brains will accomplish more than his hands.

This is not a mere mechanical work, that follows a plan by rule and line, and pro-

ceeds with precision to a certain result, but its changes are as infinite as the types of the human face, or the forms of the pebbles on the sea-shore, and the photographer that is not on the alert to take advantage of these will find his failures count up more numerous than his successes.

"Why, I thought learning to make pictures was about the same as learning any trade."

Some parts of the work are, but when you come to this *very* important part of it, it needs something *more* than the mechanical knowledge; it needs *quick perception, taste and enthusiasm*. A photographer may place a piece of statuary under his skylight, in any position it happens to be set down, draw a focus on it, and without any care about the arrangement of light, make negatives of it all day; there would be nothing artistic about that, it would be merely a mechanical operation; and this is the way many operators have worked in making sittings from life; all sorts of subjects, with every peculiarity of face and complexion, were sat in the same place and in the same light all day long without any attempt at change or variety. But as the operator who puts his whole soul into his work and is never satisfied fully with anything he does, but strives to do better, would study a piece of statuary, bring out its best points and make it a work of art, so would he do with every living subject, making every picture express a purpose of his, and demonstrate the work of an artist's hand rather than the operations of a fixed machine.

"Why, that makes me feel as though I could go right at it and do something extra. But suppose one hasn't taste and enthusiasm as you say?"

A love for *anything* will excite enthusiasm, enthusiasm will excite effort, and effort, especially in this direction, will cultivate taste. If a man or boy attempts the study or practice of anything to make it a business or profession, and finds he has no love for it, he had better leave it at once, and seek something more congenial. But I am glad to see you warming up, Focus. It is this same desire or impulse to do something better, or reach a point higher than anything yet attained, that has led on to

the noblest and grandest achievements the world has ever seen.

"Yes, but so many of these enthusiastic attempts are failures that it is rather discouraging sometimes."

I know, Focus, but you had better make a dozen different attempts, each showing a purpose to improve, and yet with indifferent success, than to make as many very successful sittings, all in the one stereotyped style, without any evidence of thought or genius in their production.

"That's just what I believe, and I mean to practice it too. But how is it about faces that haven't the peculiarities you speak of?"

Those are the ones you can try your genius on. A person with well-formed head and regular features, can be placed in almost any position and give harmony and grace. We have an evidence of this in the March number of the *Photographic World*, where twenty-five portraits of the same lady are made in as many different positions.

"O, yes, I saw those, but sobe of them you would hardly know were the same."

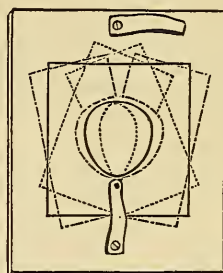
I know it, Focus, and that brings me to just the idea I wanted to suggest: that in studying for variety, study for that which is best adapted to your sitter; whatever the style of features may be, catch the best expression possible, and endeavor to have the resulting picture a counterpart of the individual that cannot be mistaken.

Graves's Improved Printing and Vignetting Apparatus.

THE ingenious contrivances we describe below are the invention of Mr. G. W. Graves, a young printer engaged with Messrs. Butt & Edmondson, Norwalk, Ohio. The first figure represents an adjustable vignetter, made as follows: A flat board is bevelled out in the usual way, of rather larger opening than is usually used. Now cut a pear-shaped opening in a card, split it in two lengthways and by the lower spring (see the figure), fasten two of the ends together. It will now be seen that when you desire to vary the size of the opening, all you have to do, is to move the parts of the card to or

from each other (as shown in the dotted lines), and your object is accomplished.

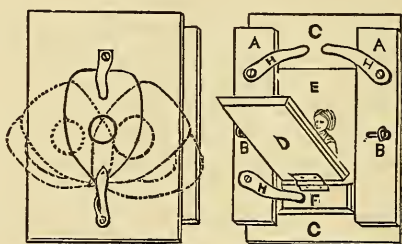
Fig. 1.



When the size is decided upon the parts are kept in place by the upper spring. In this way the width or amount of shoulder in a picture is easily regulated. The figures below show Mr. Graves's adjustable printing-frame. Fig. 3 shows the back of the

Fig. 2.

Fig. 3.



frame. A, A, are two side clamps made adjustable by the screws B, B, and so contrived as to hold the negative E upon the vignetting board C, C. These adjustable clamps are supplied so that the negative may, by moving up or down, or to one side or the other, be adjusted to the vignetter once for all, and then fastened in place. D, F, is the hinged cover of the frame, D being the larger portion, so that nearly the whole of the print may be examined at once. H, H, H, are the brass springs to hold the cover in place. Now turn over the frame, and the vignetting board, as shown in Fig. 2, is seen. A series of paper or metal diaphragms of assorted sizes is fastened by a pin, and the size in use is kept in place by springs as shown, while the others are fastened to one side.

We think all will see and admit the

advantages of Mr. Graves's contrivances; and we are glad to say, that as a member of the National Photographic Association, his veneration for that body prompts him to present these ideas to the fraternity gratuitously, all he asks being, that if stockdealers manufacture them for profit, they consider him in for a share for his labor.

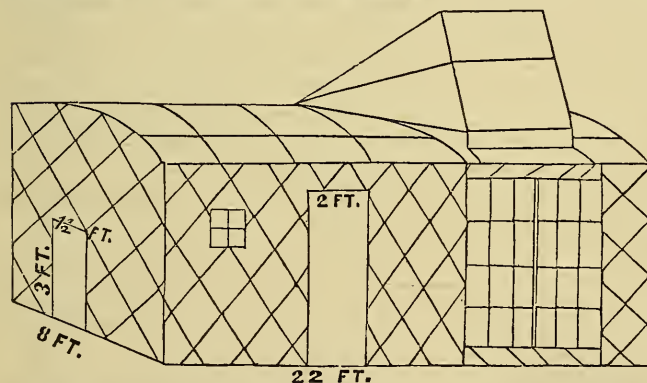
Such members of the N. P. A. are certainly a credit to it, and we hope they may multiply. We have models from Mr. Graves, and his ideas are eminently practical and useful.

How to Build a Photographic Car.

BY C. N. STEVENS.

SOME time ago I saw in the *Photographer* an inquiry as to the best mode of building a photograph car. I have one which I think is just right, and gladly send you a description of it.

I first laid the sills, and bolted them. There are five. The two which are bolted at the bolsters are 2 x 6, the other three are 2 x 4.



I then put in cross braces, made of 1 inch boards, ripped 2 inches wide, and then laid the floor. Next I put up a frame, made of the same stuff, like the diagram. Where the strips cross they are halved, and a screw put in. They are also screwed at the top and bottom. The roof is bowed with a pitch of 8 inches. The frame is then covered with felt paper and half inch siding running up and down, and matched. Where the boards cross the frame there are two screws in each crossing. The car is smooth on the outside, which gives a better chance for fancy painting. The roof is covered

with half inch stuff; then a layer of tarred felt paper, then a layer of half inch stuff on that again, and well painted with mineral paint, both between the joints and between the paper and outside covering, and then four coats of the same on the outside. There are two side windows north and south, and skylight facing north. The side windows are two common sash windows side by side. The glass is 8 x 14. The skylight is 5½ x 7 feet. The rear is raised when in position 4½ feet. There are two doors for entrance on each side; also a small door in the forward end, to accommodate the driver when moving. The truck wheels are 30 inches in diameter. The forward ones two feet from the end, the back ones 4½ feet from the rear end. The skylight is three feet from the rear end, and pitches to the side. I think this gives a better light, and the car is not so much in danger from the strong west winds. I had a car blown over and smashed last summer, and that put me somewhat on my guard. The side win-

dows are 3½ feet from the rear end of the car, and one foot from the floor. It is six feet from the side-light to the door. The dark-room is 3 x 4½ feet, and the work-room 4½ x 5 feet. The car is 22 feet long, 8 feet wide, 7 feet high at the eaves. It took four thousand screws to fasten it together. It is lined

inside with quarter inch stuff, and papered with wall paper, ceiled overhead with the same, and painted drab.

PROPHETSTOWN, ILL.

M. de Constant's Coffee-Gum Process.

M. DE CONSTANT is well known amongst European photographers as one of the most skilful and practical of amateur photographers, as well as the most enthusiastic of experimentalists. For several years past he has devoted himself with unwearying energy to an examination of the various dry plate

processes, and has at length satisfied himself that the maximum combination of good qualities,—simplicity, certainty, rapidity, and excellence of result—is to be found in the coffee-gum process which he has worked out, and his conviction is well borne out by the exceeding beauty of his pictures,—instantaneous views, portraits and reproductions, now before us. M. de Constant has just contributed to the *Photographic News* a very complete memoir of his experiences with dry plates generally, and with this coffee-gum process especially. Some copious extracts will doubtless interest many of our readers; for early copies of which we are indebted to our esteemed friend, Mr. G. Wharton Simpson, editor of the *News*.

M. de Constant commences by referring to the objections to dry processes, and concludes that there is only one serious argument that can be maintained against the dry mode of working, viz., the uncertainty of the result. Now, as regards this point, I do not hesitate to affirm that the mode of operating I now employ is so sure and simple as to rival, in these respects, the wet-plate process, and to yield prints of even superior quality to negatives taken in the ordinary manner.

Then, touching the preservation of the dry plates for a long period in good condition, I would say that plates produced by the method I advocate may be kept without diminution of sensitiveness, or other alteration, for a period of two months or more. And if I can sufficiently rely upon the experiments which I have made upon the subject, it is upon the nature of the collodion alone that this question depends.

In general, it is the custom with the greater number of dry processes to calculate the exposure at four or five times that of a wet plate, conditions and circumstances being the same. But, by employing certain preparations, and especially those in which gum plays a part, the period may be reduced by one-third, or even one-half, without jeopardizing the certainty of the result. This reduction appears to me sufficient, and it would be wrong, to my thinking, to press the point of rapidity any further. The great utility of dry collodion for copying pictures and other works of art

necessitating long exposures, its superiority over wet plates in the rendering of distance, and certain fineness of detail, ought to compensate for any lack of rapidity, and render it indispensable to every operator if, by simplifying and improving the method, we are enabled to place it within the reach of all.

Since the time—now upwards of a year—that I have exclusively worked with the process to which I have given the name of coffee-gum method, and which I have experimented with in almost every phase, my results have been so exceedingly satisfactory that it is a pleasure to me to place my experience at the disposal of those of my brethren who may feel disposed to give the method a trial. And by way of encouraging such as may desire to follow my practical instructions, I would mention the circumstances that, during the past month, I have used more than a hundred coffee-gum plates in the reproduction of difficult pictures and landscapes of every kind without experiencing a single failure that could be ascribed to the process itself; while, from the whole number, but three or four negatives, at most, had to be put on one side. I doubt very much whether I should have obtained a similar result had I been working with the wet process.

But I will now proceed to the details of my method.

I. THE CLEANING OF THE PLATES.

I have tried many ways of cleaning glass, but none has appeared to me so simple and efficacious as that described by a correspondent in the *Photographic News*, which consists in boiling for a certain time both old and new plates, whether varnished or not, in an aqueous solution of soda, made by dissolving half a pound of soda in fifteen litres of water. The plates are easily cleansed; and, as soon as the solution has been allowed to cool, they are taken out one after another, and carefully rinsed under a jet of water; when drained, and the last drops of moisture have been removed by means of blotting-paper, they are packed up, and a simple polishing with alcohol at the moment of employment then suffices to render them ready for use. If one has

plates which are somewhat more difficult to clean, I would recommend a mixture of fine Tripoli powder with three parts of water and one of nitric acid. The glass is rubbed on both sides with a pad, and the mixture allowed to dry, and remain upon the plate until the latter is required for use. This preparation, when dry, may be removed very rapidly, the plates being first freed entirely from the dust, and then finally polished with alcohol.

II. THE PRELIMINARY COATING.

I invariably apply a coating to my plate, selecting albumen for the purpose. I am glad to see that a dilute solution of this substance, which I proposed some time since, has been generally adopted; one part of albumen well beaten, and then allowed to stand, is, after decanting, mixed with twenty-five or thirty parts of water, a few drops of ammonia being subsequently added thereto. Although a solution of this kind may be preserved for some time, still it is better always to employ the mixture freshly prepared. It is best to give the last polish to the glass plate immediately before applying the albumen, as the latter is found to spread more uniformly upon a dry and well-polished surface.

The albumen film, notwithstanding its delicate nature, has always, I have found, imparted sufficient solidity to the collodion, while none of those spots and stains with which I was previously familiar when employing gelatine, caoutchouc, or concentrated albumen, have ever of late plagued me.

III. THE COLLODION.

To those who would prepare their own collodion, I must recommend particular attention to the question of the pyroxyline; the advice of Dr. Monckhoven should be followed, viz., to choose a material which has been prepared at a high temperature, and which, known by its yellowish tint, is found to separate in hard rather than in fibrous particles, and is, moreover, full of dust. The Monckhoven collodion yields intense images which nitric acid fails to dissolve entirely.

If one decides to renounce the preparation of collodion oneself (which is always

better), and it is desired to find out whether a material purchased is suitable for dry plates, it is sufficient to pour a small quantity thereof upon a glass surface, and, after setting, to rub the film with one's finger. If the collodion is rubbed into small particles, it will answer well for dry manipulation; whereas, if, on the contrary, it tears and separates from the plate in the form of ribbon, it is not fit for the purpose. In the first instance, a slight friction will reduce the film to powder, while in the second the finger will glide over the surface without injury. Finally, a suitable collodion, when sensitized and developed, will yield a hard and intense image, in which the shadows appear rapidly, and are extremely vigorous.

IV. PREPARATION OF THE PLATES.

The plate, having been coated with collodion, and the film allowed to set, is immersed in an eight per cent. silver bath freely acidified with pure nitric acid. On its entry into the solution, it is moved to and fro at the bottom of the bath for a few moments, and then allowed to remain therein for four or five minutes. It is then removed, and, having been well drained, is placed in a bath of rain-water while a second plate is put into the sensitizing solution.

The first is then carefully washed in ordinary spring water (if the same can be obtained of good quality) under a tap covered up with a small linen bag to serve as a filter; when the plate is freed from all appearance of greasiness, the washing operation may be considered to have gone far enough, and it is placed in a second bath containing rain-water, where it can remain until the time arrives to drain it and apply the preservative solution to its surface.

V. THE PRESERVATIVE SOLUTION.

The best agent for the conservation of sensitiveness is, a suitable collodion; the subsequent coating of the plate should, nevertheless, be considered as an excellent aid in the matter, from the fact that saccharine, gummy, or viscid substances, which are generally employed in this capacity, act mechanically upon the porosity of the collodion, and thus there result more certainty and regularity in the preservation of the

plates. It may be here asked, however, why, if the preservative only exerts a mechanical action upon the plate, there should have been so many modifications of the formulæ proposed? To this we would reply, that many of the various mixtures have been suggested for the main purpose of adding to the preservative solution some chemical agent possessed of a developing action which should have the effect of shortening the exposure or of softening the image; and it is with this design that new suggestions are made every day. Without in any way wishing at the present moment to deliver a course of lectures on chemistry, I propose to discuss a few of these questions which bear so much to the point.

Why is it that albumen processes always yield very clear results, but of a slow and hard nature, while those methods in which gum plays a part are to be distinguished, as a rule, by their rapidity, and the soft nature of their productions? Why are negatives prepared with coffee, tannin, and gum, although all of them developed in the same manner, with pyrogallie acid, of different colors, assuming a brown, red, green, or gray tint? I am told, in reply to these questions, it is probably the acid or alkaline reaction that produces the difference, and that a chemical analysis of the substances employed for coating would probably furnish an explanation. I admit the force of this answer, and believe that it would undoubtedly be a good thing to study the reaction and analysis of the solution to be employed as preservative, because that is the only right way to attain the end of one's purpose.

The following is the mixture which I employ:

No. 1. 150 cubic centimetres of distilled water, while in a boiling condition, is poured upon 15 grammes of Mocha coffee and 6 grammes of white sugar, both of the latter having been previously reduced to a fine powder.

No. 2. 150 cubic centimetres of distilled water are used for dissolving 6 grammes of gum arabic and 1.2 grammes of sugar candy.

The coffee extract is allowed to cool in a well-corked bottle, and both liquids are then filtered and mixed, forming together a

clear brown liquid of a certain density, which will remain in good condition for several days. The quantity destined for each plate should be filtered and poured on like collodion; a second application of the liquid is made to the same plate, care being taken to prevent the formation of bubbles, and the solution should not then be further used. The coated plate is placed on end upon a sheet of filter-paper to drain before being put into the drying closet, which we shall presently describe.

Many operators apply the preservative by the aid of a horizontal bath, which is, perhaps, the easiest mode of proceeding; but in this way a larger quantity of solution is always necessary, and moreover, the entire surface of the glass is soiled, so that the back thereof must afterwards be cleaned. For this reason the first method is recommended, which has, in my hands, always proved successful.

DESICCATION OF THE PLATES.

This operation may be considered as one of the most important manipulations connected with the preparation of dry plates. It is, I believe, the general custom to dry them in a closed box or chest, placed upon the floor in a corner of the laboratory, a vessel of hot water or some such apparatus being inclosed therein to accelerate the drying of the plates. In a mode of proceeding like this, there are several dangers to be feared, which I will here enumerate:

1. If one does not take care to change the filter-paper upon which the plates stand, at least twice, there is formed at the foot of them a pool of liquid which, more or less befouled by contact with the paper, is subsequently attracted up the sides of the plates as soon as these have dried, and produces stains and spots of various kinds, ordinarily of an elliptical shape, which, on the application of the development, are at once made apparent, and destroy some portion of the cliché.

2. The source of artificial heat introduced into a box of small dimensions, being too near the surface of the plates, precipitates the desiccation thereof in an unequal manner, acting more vigorously upon the lower portion than upon the upper.

3. The box being closed, the moisture escaping from the glass remains suspended in the inclosed atmosphere, and thus seriously retards the desiccation of the plates. To remedy this defect, M. Carey Lea, always an ingenious practitioner, proposed the introduction of a vessel of sulphuric acid (which largely absorbs moisture); but this makes matters more complicated, for the liquid is a disagreeable one to manipulate.

4. A last inconvenience of the closed box lies in the fact that, being placed upon the floor, it contains always a temperature of a sensibly different nature to that of the room, so that when a plate is taken out to be placed in the frame, the change of atmosphere produces upon the surface of the glass a slight vapor scarcely visible to the eye, but which is not the less persistent or dangerous. For if put into the frame in this condition, the vapor will materially interfere with the virtues of the plate, and cause partial, if not complete, insensitiveness, a circumstance one would scarcely attribute to so insignificant a cause.

To remedy these inconveniences, which a long experience has taught me to respect, I have adopted an arrangement which may be described as follows:

The plate, coated and finished, is stood on end upon filter-paper to drain, in the first instance, and then removed to the drying closet, where it rests upon a wood support cut almost to a knife edge. The plate is in a sloping position, with its back resting against a wooden peg or support, of which several are fitted to the back of the closet, four or five inches apart. In this way the moisture which runs towards the bottom of the plate is not arrested in any way, but flows to the lower corner, where it is absorbed by a small band of filter-paper placed there for the purpose. When the whole number of plates are finished, the draining papers are carefully removed, and the closet closed, a small shutter in the door being, at the same time, opened. This opening is covered with yellow calico to prevent all ingress of light, so that the moisture can readily escape, and a good equilibrium is maintained between the atmosphere in the closet and that in the dark-room. If I have the room warmed, as is usually the case, a

slight current of warm air is in this way established in the closet, and the plates dry gently and uniformly without any serious change of atmosphere or the possibility of injury when transferred to the printing-frame.

It should always be borne in mind never to place a plate in the frame without previously examining it in a horizontal position. If the surface is very brilliant (like that of glass), and exhibits, by transparence, no trace of fog or stain, the plate may be put in the dark slide with implicit confidence. If at all troubled with a cloudy aspect, it is best to warm the plate before a hot iron surface until it reassumes its brilliant aspect.

VIII. EXPOSURE.

As I have already stated, dry plates prepared by the coffee-gum method require an exposure of but three times that necessary for the wet process, with the same lens and same light. In operating, it is desirable to understand thoroughly the capabilities of the lens with which one works, as likewise the effect of the diaphragms, and also to make a trial of a wet plate every time that a change is made in the collodion or the silver bath. As a rule, very short exposures should be avoided, for one is much more certain of a fine result by giving full exposure, because the development is thus facilitated, and it is always better to moderate rather than force the action of the developing solution.

Although it may appear somewhat paradoxical, I may state that a long exposure is more necessary during bright sunshine, from the presence of great contrasts, arising from the intensity of the shadows. I believe, indeed, that it is impossible to secure a fine landscape negative endowed with harmony and full effect of distance during full sunshine, although, from the fact of many of my brethren choosing very bright days for their work, it would appear that there are not many of my way of thinking.

IX. THE DEVELOPMENT.

As a general rule, I believe it to be the best plan to develop one's plate immediately. The operator is generally anxious to know at once the nature of his result, and it is

very seldom indeed, even on a distant tour, that arrangements cannot be made to proceed with the development. At the same time, it may always happen that the postponement of this operation is indispensable, and it is therefore always well to employ a process which allows of such a proceeding. With the coffee-gum method I have made but few experiments on this point, but it may be safely taken for granted that no inconvenience will be experienced when developing twenty-four hours after exposure.

In employing the alkaline development I do not use bromide of potassium, and I, moreover, alter the order of application with the ammoniacal solution, commencing my operations with that agent *alone*. After all that has been written on this matter, my mode of proceeding may appear an extraordinary one, but I have a very good excuse for it, in the fact that my results are always excellent, and, therefore, I follow no other plan. I will describe in a few words my method of proceeding.

The exposed plate having been covered with rain-water, or immersed for three or four minutes in a bath of that liquid, is drained and placed in a horizontal position; over it is then poured sufficient distilled water to cover the plate, to which six to ten drops of a saturated solution of carbonate of ammonia have been added. This liquid, which is kept upon the plate and moved to and fro over the surface, restores to the dry film its original permeability, and commences, indeed, the action of development, for, if sufficiently exposed, the sky and high lights begin forthwith to appear. If the exposure has been too short, the effect is hardly, if at all, visible; but the operator need not despair on this account, for with a little time and patience it is possible, with the aid of the agents I shall indicate, to triumph over the most obstinate development. In any case, as soon as the aqueous solution of ammonia ceases to act upon the film, it is poured back into the developing-glass, and a few drops (from one to three, according to the progress of development) of pyrogallie acid dissolved in alcohol are added; this pyrogallie solution is prepared by simply dissolving six grammes of pyrogallie acid in one ounce of alcohol. The

mixture is not poured upon the plate from one spot, but applied over the whole of the surface at once, as the effect is frequently so rapid that spots or stains are otherwise produced.

The image now fully appears, but it is seen only by reflected light, and is scarcely visible when the plate is viewed as a transparency. Nevertheless, the action of the solution is continued until every possible detail in the shadows has been brought out. You can scarcely develop too much, for it is these details which give rise to the half-tones, and produce that harmony and softness which impart so much charm to the picture. I have also been successful in elaborating a means of completing, or even forcing, the development if necessary, in the case of under-exposure; this method, which is a new one, consists in using a solution of iron after the application of the alkaline pyrogallie developer. Many experiments were necessary before I was able to fix upon the elements and proportions of the same for this novel developing agent, and at last I have determined upon the following formula:

Water,	. . . . .	100 cub. cents.
Ammoniacal Salts of Iron,	. . . . .	3 grammes.
Sulphate of Copper,	. . . . .	3 " "
Citric Acid,	. . . . .	3 " "

This compound, which may be preserved pure and in good condition for a very considerable period, is poured upon the well-washed plate, and sometimes produces by itself sufficient action. Generally, however, it is necessary to complete its action by adding a little silver, when details will at once appear, which otherwise would never have been brought to light; and it is, indeed, but very rarely that with the aid of this solution a satisfactory result is not attained, even in very unpromising instances. The negatives treated in this manner become more opaque, and assume in general the ordinary gray tint of wet plates, instead of the brownish-red color usually possessed by them. In every case a more or less complete intensification is necessary. I do this with an ordinary citric and pyrogallie solution thus compounded:

Water,	. . . . .	300 cub. cents.
Pyrogallie Acid,	. . . . .	2 grammes.
Citric Acid,	. . . . .	1 gramme.

This mixture is in the first place applied alone to the plate, and subsequently one or two drops of a three per cent. silver solution are added to the solution.

This intensification must be conducted with very great precaution, for it is difficult to judge of its effect, and frequently the action is allowed to go too far. The image soon acquires vigor, while preserving its softness and transparency. At the same time there are some descriptions of collodion (very excellent for general use), which, when exposed to the sun or very bright light, soon become solarized, and are thus incapable of attaining sufficient vigor, and when finished are possessed of a dull rose color. As negatives of this kind print very badly, the operation of intensifying must be stopped and postponed until after the plate has been fixed, care being taken to wash thoroughly between the two manipulations. In this way the details of the image are rapidly brought out, and the negative passes from a rose color to that of a dark purple, a very favorable tint for printing purposes.

This last method of intensifying requires at least as much care as the preceding one, and it is necessary forthwith to pass the plate into the hyposulphite bath. In following the directions I have indicated, the operator has at his disposal a series of methods by means of which, with a little skill and discretion, he will be enabled almost invariably to secure a satisfactory result.

In recommending the operator to commence the development with the ammoniacal solution in a cup or glass, I have sought to simplify, as much as possible, the necessary utensils; but when working in the laboratory, I think it is better to add the ammonia at once to the water bath in which the plate is first immersed for moistening the film, as the preliminary operation is thus carried out with more uniformity, and the subsequent developing action rendered more active. As a matter of course, in this case it is necessary to add the ammonia in a suitable proportion to the quantity of water contained in the bath—say about thirty or forty drops of ammonia to a utensil of ordinary size. But as I have before said, if the exposure has been well-timed, the high lights will be already rendered visible

by this treatment, and the plate is then placed upon the support above mentioned, and the development continued with some more ammoniacal water, to which a few drops of pyrogallie acid solution have been added as previously described.

X. THE FIXING OF THE IMAGE.

In the face of the many accidents which yearly happen with cyanide of potassium, it is really inexplicable why the same is still used in our studios, seeing that it is easily replaceable; and surely one is compelled to breathe quite sufficient of unhealthy fumes and vapors in photographic operations, without needlessly having recourse to a further danger. For this reason, I have determined to banish cyanide of potassium from my studio. A bath of saturated hyposulphite solution is employed instead. But I find that for dry plates it is very necessary to prolong the operation of fixing, for the negatives are very loath to part with the iodide of silver contained in the film. And often one finds, upon printing, that there still remains a trace of that compound, large patches being produced, which, on exposure to the sun, become more and more intense. At the same time, when it is carefully ascertained that the iodide has been completely removed from the margin of the plate, one may rest assured that it no longer exists elsewhere, and that the image has been well fixed."

Here we think our readers will find a dry process to please them. Mr. William Bell, of our city, has already tried it for lantern transparencies, and if his results are any criterion, the process is a most valuable one. We have never seen finer transparencies than those made by Mr. Bell.

ROSS LENSES.

(Continued from page 122.)

THE variety of view lenses made by Mr. Ross is greater than that produced by any other optician in the world. "Why such a variety?" you ask, and we answer, in order to meet the requirements of modern photography. We all know that a lens suited to distant views is comparatively valueless for a near and expansive view, and that a lens admirable for the latter work is wholly un-

adapted to making instantaneous views, &c., &c. The necessity for a *variety* of lenses is therefore apparent. The most *powerful* lenses made by Mr. Ross for outdoor work, copying, &c., are his Doublets.

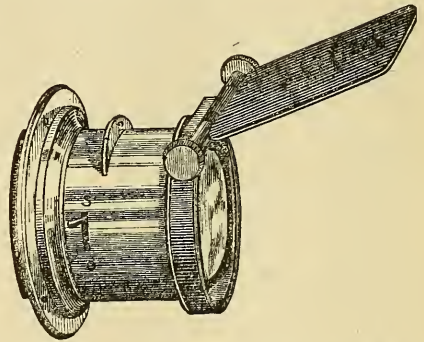
These lenses were introduced by Mr. Ross in 1864, since which time they have been extensively imitated under other names and under trivial mechanical alterations. Their characteristics are that they project sharp images quite free from distortion, and that by their peculiar configuration they are entirely free from the central flare-spot or "ghost," that had for so many years previous to the introduction of the "Doublet" been invariably the consequence of using combination lenses for landscape or architectural work. As architectural lenses they are unrivalled; as copying lenses it is enough to say that an engraving or a map may by them be copied so as not to sacrifice even the minutest line or point in the original.

A noticeable feature in the Doublets is the very large angle of view included by some of them. The "Wide Angle" series includes an angle of 95 degrees on the diagonal of the plate; the medium series gives about 75 degrees; and the "Instantaneous Doublet," so called from its rapidity of action, includes about 40 degrees.

In the case of the "Wide Angle Doublet" it is not recommended that it be used except when a wide panorama of nature is to be depicted, or in architecture, when the surroundings of the building to be taken are such as to preclude the possibility of getting away from it to a sufficient distance. It has a giant's power in these cases, but it is a power that should be wisely exercised.

The Medium and Instantaneous Doublets are of most general utility. There is scarcely a class of pictorial subjects that can be presented to the camera in which the former will not give the most unbounded satisfaction; the foreground is sharp and bold, the distance equally sharp, yet abounding in that atmospheric effect which goes so far towards making the artistic, finished result, while the projection is of that perfect kind as to satisfy the eye of the most exacting. The Instantaneous Doublets are more rapid in their action than the former

on account of their greater angular aperture. Although not so intended, they can be used (and by many of our highest artists are used) for obtaining groups in a well-lighted studio. When employed for portraits in the studio, they are much slower than the portrait lenses already described; but where the sitter can sit for a sufficient time, the portraits obtained by means of this quick-acting Doublet are exceedingly harmonious and fine. We have every confidence in their ability to please even the most fastidious. The Doublets are supplied with a lengthening tube which enables one to use them as a single lens. They also have an instantaneous shutter supplied with them, as shown in the cut.



For a cheap lens for ordinary work Mr. Ross's landscape lenses are excellent. There is a degree of pluck and vigor in photographic landscapes taken with his single achromatic combinations that render them favorites with every artist. They are not intended for architectural subjects, although, when such subjects are not allowed to be projected near to the margin of the plate, there is no deviation from rectangular delineation that can be detected by the eye.

The Actinic Triplet Lens is another of Mr. Ross's specialties constructed for the special work mentioned below.

Shortly after Mr. Sutton introduced the Triplet Lens, Mr. Ross bestowed much attention upon the subject, and after many investigations he succeeded in forming an Actinic Triplet that is universally acknowledged to be one of the most *useful* instruments that a photographer can possess. First, because when used without any diaphragm it takes, in a well-lighted place,

both groups and portraits. Secondly, because it is the most perfect architectural lens in the world, giving a degree of definition so intense that the geological structure of the stone may be noted. Thirdly, because when employed for copying maps, drawings, or engravings, it yields copies which, in respect of uniformity and sharpness, are invariably equal to the originals. And, lastly, because with these advantages they give absolute freedom from distortion, include a moderate wide angle, and yield negatives of surpassing brilliancy.

For stereoscopic work both the triplets and doublets are made of proper size and focus. Mr. Ross also makes the "Wilsonian" single lenses, for quick landscape work, of 6 inches focal length and $1\frac{1}{2}$ inches diameter, which is a very useful cheap little lens. But for the regular work of an artist, a part of whose time only is occupied in landscape work, and where rapidity is necessary, our decided preference is for the Instantaneous Stereographic lenses. The characteristics of these lenses are their great rapidity of action, in virtue of which street scenes with moving figures, seaside sketches with surf, breaking waves, figures, gulls, shipping, &c., may all be obtained in the most perfect manner. The fleeting smile of the infant can by it be secured; in short, for every purpose in which rapidity is required this lens will be found invaluable.

Yet, with all these *special* lenses for landscape work, if you have a pair of the regular carte de visite portrait lenses, you cannot well secure anything better for landscape work, architectural objects, and outdoor groups.

Mr. B. W. Kilburn has a pair of them, and he says, "No lens can excel these until some new dodges in optics are discovered. I never dreamed such work could be made as they make."

In Europe the Doublet Lenses are very much thought of, and Messrs. Frith (whose views in the Alps are sold largely in New York), Cherrill, Wilson, Bedford, Good, Beechy, and other talented landscape artists, give Mr. Ross the highest praise, and copies of their testimonials are before us.

This closes our papers on this subject, and for further particulars we refer our readers

to the elaborate catalogue furnished by Messrs. Wilson, Hood & Co., Mr. Ross's agents in America.

BLACK'S ACID NITRATE BATH.

WHILE many of our co-workers are making efforts to see with what success they can make an alkaline bath work, our good friend, Mr. J. W. Black, of Boston, has busied himself in working just in an opposite direction.

We make the following extracts from a letter he has written us, accompanied by some prints which show his negatives to be fully up in every good chemical quality to any work we have ever seen him make.

He writes: "I have another novelty to offer you in the way of a negative bath that I will try against anything else. We have been rather *orthodox* in our thoughts in the matter of the nitrate bath, and now I am going to broach a little heresy.

"Take one pound of nitrate of silver and add water enough to make the solution the strength of fifteen grains to the ounce. Add C. P. nitric acid, *seven ounces*—nothing else—no iodizing, but simply filter for use. If it works hard and intense, *add more acid*. Collodion about as usual, but use no bromides. Excite with iodide of ammonium, and say half a grain of any soluble chloride to the ounce. I use as much alcohol as I can in making the collodion, and gun cotton enough to give it a good body. Use the developer quite weak, so that the picture will be almost a minute in developing. It works quite smooth and clean if you time the negative right. I rarely have to re-develop. Now if you know any one who beats me on acid I would like to know him, as I am not too old to learn."

We have no doubt, Mr. Black will exhibit some of his work at the Exhibition, where all can examine it and wonder over it.

At a late meeting of the German Photographic Society, Mr. Otto Lewin, with Mr. F. Ulrich, 156 Bowery, N. Y., exhibited some very fine Rembrandt effects. We have since been favored with copies of them, and we do not wonder that they attracted so much attention. They deserve all that was said for them.

A Rip Van Winkle in Photography.

BY W. L. SHOEMAKER.

WHILE conversing with an old photographer recently, I discovered in him a veritable "Rip;" actually found a man who claimed that as far as his experience could teach him nothing new had been discovered, nor any improvement been made in photography for the last twelve years.

While talking he casually put his hand on a book lying on the desk, picked it up, and asked what it was, and perhaps you will doubt, but he had never seen *The Philadelphia Photographer* before.

We should cage him for the next Exhibition.

My experience is very different; being addicted to the habit of asking questions whenever so disposed, has taught me in fact what little I know.

Twelve years ago I asked a simple question of a man who now considers himself a disciple in the business; not only was I laughed at, but an incorrect answer was given. I being ignorant of the truth worked to my loss, and eventually lost a position through the error.

In those days the little and great ideas that are now exchanged freely were carefully hoarded up; they were considered secrets, and as so much capital, not to be parted with unless for money.

There are yet a few mysterious men in our business, whose favorite remark is, "*Don't mention it to any one.*" They are not successful men; their self-importance has a small limit; these members of the "Winkle" family use the same accessories and make the same style of pictures continuously, all after a stereotype fashion.

When young Goahead steps in with his new, clean styles, and runs away with all the trade of old "Rip," the latter "cannot see why trade is so dull."

Well I for one heartily thank the *Photographer* for the great influence it has created in keeping the avenues open for the reception of all truthful information, never having to second any motion, but always being the first on the floor with fresh knowledge and experience.

Go to such men as Fennemore, Browne, De Morat, and plenty of similar men as may

be found everywhere, in these good days of the National Photographic Association, and you are always set on the right track when you are in search of knowledge.

The subjects of a photographic college and an apprenticeship system are now occupying the attention of some of the thinkers of the profession; but we are not sufficiently organized as yet for such undertakings; but by continuous agitation the subjects will ripen to good results eventually.

Our profession is partly scientific and partly mechanical, and can only be thoroughly taught by those competent. We may compare it with Dentistry.

I have an acquaintance who practiced in that profession thirty years, and was considered by others in the business as thorough, yet he told me that a few years since, after taking a thorough collegiate course, that his previous experience was merely mechanical. So with the photographer; almost all have a smattering of the chemistry of Photography, but how many are willing to acknowledge they fully understand it?

Time and journals will school the future photographers.

Old "Rip" shook his head and said we were wasting both time and money giving yearly conventions and exhibitions, and he really thinks the next will be the last one. Well, I am going to present "Rip" with a ticket. I think then it will not be the last one he will go to.

Here is my idea of a photographer.

One who has by his own merit raised himself high in the business, who does not feel that he is important, never feels that he has reached the top of the ladder, but is always ready to take the hand of the one next lower, raise him to his level, and always willing to accept a lift from the next above; such a man is ABRAM BOGARDUS.

NOTES IN AND OUT OF THE STUDIO.

BY G. WHARTON SIMPSON, M.A., F.S.A.

Preserving Sensitive Paper—The World—Obituary.

Preserving Sensitive Paper.—One of the most ingenious experimentalists amongst my correspondents has recently found, that

carbolic acid in place of fuming is valuable in giving vigor to washed sensitive paper. The washed paper is floated upon water which contains carbolic acid, a few grains to the pint. Without free nitrate and without fuming, the washed paper prints vigorously, assumes a rich color, and equal to any fine finished print.

The World.—I do not know whether I have before congratulated you on the excellence of the result of your new enterprise, the *Photographic World*, which title is well justified by the comprehensiveness of the work. Those who have noted, as I have, how thoroughly your readers are kept *au courant* with everything of any value or interest transpiring in the history of photography, with every kind of necessary instruction, with every form of useful hint scientific, artistic, and practical, might have felt some wonder how another publication, distinct, yet similar, could be issued without clashing with the *Photographer*. But in the *World* we simply find fresh accession of interest, so that the readers of either are kept well informed; the readers of both perfectly informed and in no wise confused, as, whilst each journal is distinct and complete without the other, yet, each seems consecutive to and perfectly harmonious with the other. I congratulate you on the perfectness of the result, and hope to learn ere long, that I may congratulate you on the success.

Obituary.—We have just lost the oldest professional photographer in this country, and in many respects the best, Mr. J. R. Williams, a gentleman comparatively little known, being of an exceedingly retiring disposition, who commenced his professional career as a photographer with M. Claudet, in 1840. In the special class of work he has done, he has generally been recognized as producing the finest of any one connected with the art, and has probably done the finest quiet business. Without advertising, without exhibiting specimens at the door, simply by the gradual accretion of private connection, he has for years realized a net profit of from fifteen to twenty thousand dollars.

The chief influence exercised by Mr. Williams on photography consisted, not in

making discoveries or initiating novelties, not in communications to societies or articles in journals, but in the force of a great example. His productions were always something to work up to, and for many years seemed to present to the majority of portraitists a pinnacle of excellence altogether unattainable, dependent upon occult causes, the arcana of which were impenetrable. Mr. Williams was, however, an originator. To him, if we are not mistaken, photographers are indebted for the simple suggestion of iodizing the nitrate bath, instead of spoiling the first few plates immersed into the uniodized solution. He was the first also to produce the charming subject stereo slides which had at one time such a rage. As a rule, his work possessed, in virtue of excellent lighting and skilful photographic management, the rich delicate modelling with which photographers are now familiar as the result of retouching the negative. A fine perception in selecting always the most beautiful aspect of a head, and an instinctive knowledge of the treatment and arrangement which would render it at once the most picturesque and characteristic, were also amongst the essential elements of his success and reputation.

Great excellence and complete success in any art generally depend upon a combination of qualities; but, probably, to no one quality did Mr. Williams owe so much of his success as his exquisite delicacy of taste, his fastidious demand for faultlessness within the range of his perception. No result was good enough which was not the best attainable. In a business returning five or six thousands of pounds per annum, rarely a picture was permitted to be sent out which had not passed under his eye. We have seen him throw aside ten out of a dozen whole-plate vignettes sent in by the printer, in which scarcely any fault was perceptible; but the shape, gradation, or the extent to the eighth of an inch of the vignetting did not come up to his standard, or the precise depth or tint might be improved; and if improvement were possible, the print was ruthlessly condemned. This precision and fastidiousness of taste governed the whole of his work. No anxiety to do busi-

ness would induce him to try sitters in bad light, when good negatives were impossible. The issue of such a course is instructive: few portraitists have ever attained such high rates for their work, or have had such an extensive first-class connection.

To skill, precision, and taste, Mr. Williams added singularly winning and graceful personal qualities. Gentle, conciliatory, and amiable, he everywhere created a favorable impression. The loss to photography and to his friends is great, and it is scarcely mitigated by the reflection that success induced—as it should not do, but too often, alas! does—too close, too anxious, and too protracted attention to duty, and too much neglect of personal comfort, rest, and restoration, and thus cut short in its prime a life that might have been long, happy, and useful.

LITTLE DROPS OF GOLD.

BY YOUNG CHLORIDE.

Apologetic.—I was called down to Alabama last month to make some pictures, and the call being rather unexpected I had to disappoint your thousands of readers, leaving them without a drop of gold.

The Exhibition work, I see, is going on finely, notwithstanding my absence, and I am glad the prospects are so good for an elegant show. I was neither at Cleveland or Boston, as my employer "couldn't spare his men to run away from business," so you may know I am going to have my eyes "open tight" *this* time. I am preparing for a large store of knowledge to be derived from examining all the elegant photographs that will be there, and from the instructions that will be given by my superiors in lighting, posing, manipulating, &c. I am expecting a regular jubilee, I tell you, and I hope there is at least a thousand more doing the same thing. Oh! that will be joyful, so much good work to see.

"*To my Patrons.*"—Once again you have hit the nail right on the head. Any photographer can tell you of thousands of tales of woe and insult, absolutely, that he has had to bear from those who come to his gallery, seemingly to take possession of his

place pro tempore, to exercise their own conceit for awhile, and then pay him or not just as they happen to please.

If they will only take hold of your little book now, and have the backbone and pluck to *scatter* it among their patrons, be assured a "better time" will soon come, and *we* will do the photographing, and not the public.

The information you give is excellent, to the point, and will do a great deal of good. You have had my order for five thousand, and they are doing me an immense amount of service. I have a lot on my reception-room table. I can see people take them up and read them while awaiting their turn, and they have all sorts of effects. Julia and Emma titter over it, and then pout, and old Mrs. Brownie frowns while young Poppy looks defiant, but when they "come to my arms" under the skylight, they are as gentle and submissive as lambskins. Stand up for your rights and—you'll get them.

Mr. Scholten's Card Pictures.—Ah me, what pictures of children! I am glad we are to have some more of them in the *World*, and that we shall both see Mr. Scholten and more of his work at the Exhibition.

The Holyoke Carte in the *May World* is also an admirable idea which I shall adopt and push. Why wouldn't this and the *cameo* combined be a fine thing? I am going to try after the June excitement is over, and will report to you.

Big Growls.—I don't know when I have been so amused over anything as I was over the *May World*. First I "convulsed" over the "Scene in a Photographic Gallery South," then I "collapsed" over Mr. Wallace's "Which is the Best Lens," but after I had read the "Big Growls," by Mr. Greenlees, I felt an inward goneness which made me faint. "*A*" N. P. A. is good. Who is to be the judge whether I am a fit subject or not to have my *A* taken a-way, and to become simply a-n N. P. A.? Let Mr. Greenlees and his "associate" growlers wait awhile, and they will see what good the National Photographic Association will do. Let them all come to Philadelphia, and we will teach them something perhaps.

The World I like more and more every

month. The foreign selections are most instructive and excellent. I am sure your efforts in this line only have to be known to be appreciated. Keep it up, and your reward is sure.

"TO MY PATRONS."

DURING a year or two past we have had a number of requests from our readers to publish a little book of instructions as coming from the photographer to the patrons of his establishment.

We well knew the *need* of such a work, for we experienced the evils of not having it when actively in the business a few years ago.

We have taken abuse and impudence from people in our work-room, the result of their ignorance and conceit, that no gentleman ought to take from another without the privilege of afterwards putting him out of doors, as the gentlest thing to do under the circumstances. Moreover, we have had to waste much valuable time in trying to explain to some ignoramus what he ought to know beforehand, while a room full of customers sat waiting their turn—a matter of indifference to him though.

Therefore, in writing this little leaflet, "To my Patrons" we have sympathized entirely with the photographer whom we know has to meet such cases constantly, and have tried to frame words for him to convey to his customers that would raise their respect for his person, his rules, his rights, and his time. As we have said in the prelude, "The intention of this little book, is to say a few words in a kindly way to those who have photographs taken, in order that the intercourse between them and their photographer may be pleasant and result in the most successful pictures. People who desire pictures generally, seem unwilling to give the necessary time to secure good ones. As time is precious, therefore, we publish this, that you (the patrons) may be informed beforehand on certain points, a knowledge of which will *save* time."

We then follow with an argument in favor of Photography as an art requiring good taste, skill, knowledge, expensive apparatus, &c., to follow it rightly. After this, "*when to come*," *i. e.* on what sorts of days to come; *how to come*, *i. e.* not flurried

and in a hurry; "*how to dress*," *i. e.* what colors, classes of goods, trimmings, head-dresses, arrangement of hair and so on to appear in; "*how to behave*," which chapter more particularly explains matters of courtesy due the photographer by his patrons, together with hints on children, business, frames, copying, coloring, &c., &c. We have endeavored to meet the case entire, and turn the work over to our readers to judge of it. We are grateful for the acceptance it has already received by several who are using it.

OPAQUE.

MESSRS. GIBON & THOMPSON of this city have recently introduced material for the use of photographers, by the name of OPAQUE, which has attracted considerable attention, and received the warmest encomiums from those who have tried it.

It is a dense, pasty paint, adhering readily to either side of a negative, and being readily soluble in water, can be easily removed if occasion requires it.

It is well adapted for the retouching of negatives, and is particularly useful for printing false backgrounds to copies, for whitening the skies of landscapes, or to the more particular display of machine work.

Solar printers will find it invaluable, and it is claimed to have a number of minor uses, that will suggest themselves to any working photographer.

For obscuring lenses or stops, for coating the inside of camera boxes or vignetting-boards, it seems to be an article always "handy to have in the house."

Its other advantages are that it is cheap, always ready for use, and admirably supplies a want, to fill which nothing else has ever been offered.

"IT PAYS."—One of the largest *advertisers* in the West in photographic goods appreciates printer's ink. Charles W. Stevens, Chicago, believes in it, and the result is a large business, rapidly increasing. Western photographers noted for their enterprise, are liberal in their support of a stockdealer that keeps up to the "*Times*," and tells them what is going on. Another full page in this month's *Philadelphia Photographer*. It *pays* stockdealers to advertise in it.

APPRENTICESHIP.

THE *Committee on Apprenticeship* appointed at the last meeting of the National Association, will report in favor of some proper system of apprenticeship. It will be remembered that this subject was thought of at the birth of the Association, and it is one which will no doubt have an animated discussion in June. That there is great need of such a system the many bad pictures made prove, and that the status of the art demands such a system, the advance of photography is daily convincing us of. Our art is growing ahead of us and we must have force enough under the process of education to care for it. We commend the subject to the careful and thoughtful attention of all who are interested, and also make the following extract from a British contemporary which is to the point, on

ASSISTANTS.

That the subject of assistants is of some importance will not be denied when it is considered that on assistants—masters expectant—the future of photography mainly depends; and it therefore behooves those who are at present not only employers but lovers of photography to consider how they may best further the art they profess.

The method of engaging assistants at present in vogue is not at all satisfactory. So far as I am aware it is very seldom a photographer apprentices or enters into any agreement with those he employs; consequently, as there is no indenture, it very often happens that after a boy has been some time in the employment of one photographer and is just becoming useful, the offer of a slight increase of salary by a rival photographer—who thus hopes to get his possibly more successful neighbor's "secrets"—induces him to leave, to the great annoyance and inconvenience of his master and detriment to his own character.

The remedy for this is obvious. A few weeks' trial, at most, will enable the employer to decide whether the boy is likely to prove suitable or not. If suitable let the photographer engage or bind him for a specified period, say for five years—two in the printing and three in the operating-room. Should the lad during the prelimi-

nary trial prove unsuitable, it is unquestionably better for both that he be dismissed at once.

I think it would tend materially to improve the status of photography if apprentices had either to pay a premium or give their services for half the period of apprenticeship for nothing. This would effectually exclude those whom necessity, not choice, compels to take whatever sort of situation offers itself first, without any reference or regard to their inclinations or ability, and it would induce a better class of young men to turn their attention to the profession. I think that photography should, in this matter, not be behind professions of a kindred nature, all of which, I believe, make a premium or gratuitous service for a period a necessary part of the arrangement in case of apprenticeship.

There is another thing which militates against the advancement of the art in so far as labor is concerned—that is, wages. The average salary of photographic operators does not exceed, if indeed it equals, the wages of an ordinary tradesman. If it be admitted that, in order to become a successful photographer, a certain amount of technical education is necessary, it is only reasonable that the return for the pecuniary outlay incurred in *that* education should be something more than at present.

Of course those palmy days when photographers could acquire a handsome fortune in the course of a year or two are, alas! things of the past. Then employers could easily afford to pay large salaries; but if photography, as some people say, has seen its best days, let us hope it has seen its worst also. The profits in an ordinary business are such as admit of a handsome remuneration being allowed to assistants.

The photographic busy season is of short duration, and it is a very difficult matter to provide work for assistants during the long, dull months of winter; but I think a great deal might be done in the production of transparencies of portraits. The photographer could easily find out those of his patrons who would be likely to purchase such productions.

Then, again, the waste-paper cuttings could be collected and burned, the print

washings dried and reduced, negatives cleaned and rearranged; and thus the winter might be got over without an employer being obliged to dismiss any of his staff of workers.

The breaking of negatives is ever a sore point between photographers and their assistants. How does it happen to be always the best and most valuable negative that gets broken? I think it might be traced to the same reasoning that attributes a superlative degree of goodness to those children who have "gone before."

In conclusion: I would take the liberty of recommending to my brother assistants to carefully collect and preserve all stray bits of sensitive paper, to remember to "salt the washings," and to handle carefully all the negatives—in short, to take an interest in their work—and their employers will not fail to take an interest in their *employees*, and all that relates to their advancement.

SCOTCH THISTLE.

OUR PICTURE.

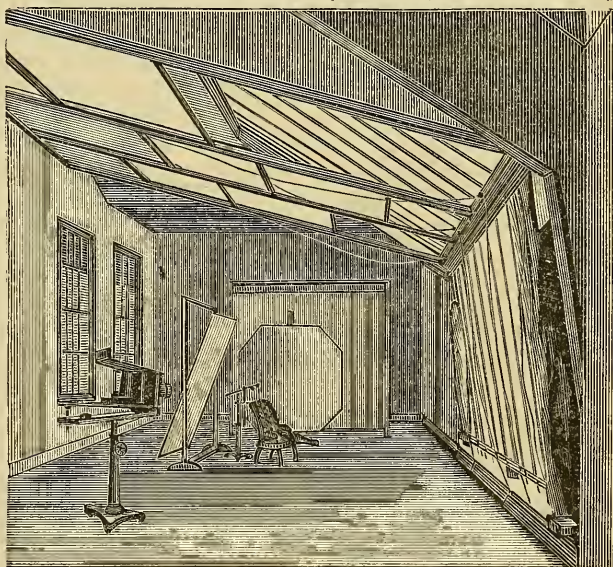
It is a long time since our readers have been treated to an example of the work of Mr. J. H. Kent, Rochester, N. Y. We have given them, from time to time, pictures from his studio which were not only convincing evidence that he was one of the best of photographers, but also that he was one of the *leaders* in the profession. Our present picture is also a specimen of his work, and, as will be seen, is from a very finely worked negative, showing that Mr. Kent keeps pace with all the modern improvements. It is a fine study of this branch of photography, and one which the would-be perfect negative retoucher will do well to follow. As an example of general negative making and printing, it is also very fine.

We purposed giving a detailed account of Mr. Kent's method of working at present, but, as will be seen by the note below, he proposes to give us this at the next meeting of the National Photographic Association, and we must not "take the wind out of his sails." We annex a cut of the interior of his skylight, made with the intent alluded to above, and our readers will find it convenient to refer to when the report of Mr. Kent's paper read before the Association follows. We have witnessed his working in this light, and the effects he gets are very fine, everything he desires, and anything he desires.

The subject he has selected is Mr. D. Hovey, the manufacturer of the brand of albumen paper bearing his name. Mr. Hovey's head offering particular advantages for showing the effect of the skilful retouching of the negative, and also being a subject of whom it would be difficult to make a first-class picture *without* the aid of this great modern improvement, he was chosen as Mr. Kent's subject.

Mr. Kent says:

"In making the picture of Mr. Hovey, I have acted upon the suggestion that many



photographers would be glad to see the manufacturer of the 'Great American' Albumen Paper, now so extensively used.

"Perhaps it may be an innovation upon your custom as regards putting in members of the craft; but Mr. Hovey can hardly be said to belong to the photographic fraternity except as a manufacturer.

"His paper manufactory is one of the institutions of Rochester, and is by far the most extensive of any in the United States.

"Of the quality of the Hovey paper I shall say nothing; letting it speak for itself, since I did not intend to advertise it.

"It has been customary to give the working formulas with the illustration, but mine not being materially different from others, I have not thought it necessary to do so. I have, however, in compliance with the request of President Bogardus, prepared a paper to be read at the June meeting, in which some description of my light and manner of working will be given.

"I will only say here that my sittings are made *anywhere* under the light; the screens being so arranged that they can be opened or closed at any point by the operator while standing at the camera.

"The printing of the pictures was done by Mr. William F. Carnall, of Rochester, to whom much credit is due for the excellence of the prints and the rapidity with which they have been made.

"His printing and toning formula is the same as that sent by Mr. Hovey with his paper.

"J. H. KENT."

The beautiful mount on which these pictures are mounted, was designed specially for us by Messrs. A. M. Collins, Son & Co., and is one of a series of new things they are getting out for us. We feel great pride in the production of such beautiful mounts in our own country. The manufacturers have the most tasteful artists in their employ, and can meet any taste.

Correspondence from the Country.

BY ELBERT ANDERSON.

Operator at Kurtz's Gallery, 872 Broadway, N. Y.

Vassar College

Is situated about two miles east—as the turkey flies—from the town of Poughkeepsie. It is an enormous structure of brick, consequently of mortar also, erected in 1861,

by a French gentleman named Matthew Vassar. There are at present about three hundred and seventy-five *beautiful* (of course) young ladies here, preparing for an examination, whatever that may mean, propelled by thirty-five to forty professors and professoresses. Miss Maria Mitchell, the celebrated astronomer from Nantucket, superintends the observatory here. There is also a gymnasium, a riding school, ball room, &c., &c., also, a beautiful lake, where the young ladies, although they frequently have a regular row, seldom fall out. In fact there is everything here calculated to make the scholars healthy in body and wealthy in mind.

Having been chosen to come out here and photograph these "trembling maids," I started with a light heart and a heavy purse, on Monday morning, May 1st, and by Tuesday afternoon all was in readiness for the first sitting. Just about this time, however, Jupiter Pluvius thought he'd take a chance, and has "kept in" ever since. Talk of its raining during the deluge! This rain storm is a deal huger, and has thus given me time to inspect my common companions.

I am stopping at the Bull's Head tavern. (Calf's head would be far more appropriate.) Directly opposite is a large encampment of gypsies; the inhabitants of which consist of pigs, women and men. The men talk horse, do horse, smell horse, all day and half the night. Indeed, sitting out late one wet night listening to their talk, I found *myself* talking quite hoarse the next morning, but a pony of brandy soon made that all right. The women "swear most horrible," and smell strongly of a peculiar and curious intermixture of counterfeit cheese and imperfect milk. They have long, coarse hair, wild eyes and beastly feet. The pigs are decidedly the most respectable part of the whole establishment. They talk less, smell—well, a fair average—and behave infinitely better than the rest of the members of the band. There is among the gypsies one whom they call their king. I have never been brought into daily presence of royalty, and was surprised to see the very great superiority of regal honor over us common folk. His supreme highness was eating clams yesterday, and as the juice of these

bivalves streamed down his whiskers and filthy shirt, he wiped his mouth magnificently on a neighborly horse blanket. The delicacy and grace of the action would have raised feelings of the most poignant envy in the breast of the late lamented Beau Brummel.

Have you ever dined at a country tavern? Yes—? Then you know how it is yourself. I was asked if I would “like a piece of home-made pie or boughten pie.” I preferred the former simply because I had no conception (bless my innocence) of the meaning of the latter, and Shakspeare says, “It is better to eat those pies we have, than fly to those whose contents we know not of.” I was brought a flat, pasty, unwholesome mess; all my analytical skill, however, failed to detect the slightest trace of apple. Next time I’ll go for the “boughten.”

There’s not such a thing as a book in the whole establishment, not even a Bible, and I honestly believe that had I asked for the last number of the *Philadelphia Photographer* they wouldn’t have had it. Such a state of things is of course hopeless. By the by, speaking of the *Philadelphia Photographer*, owing to my being so long and far from home, I shall not be able to inflict my monthly pill of Marshalllic discourse on your readers—lucky dogs; but let them take heed, I will come down heavy on them next time.

NEW YORK CORRESPONDENCE.

NEW YORK, May 3d, 1871.

THE regular monthly meeting of the Photographic Section of the American Institute was held last evening.

Mr. O. G. Mason of the Committee on Printing, appointed March, 1870, reported, as often before, “progress.” The Committee for some reason unexplained never having worked together; each one on his own responsibility; therefore no regular report has ever been submitted. Mr. Mason exhibited several very fine prints, the whites of which were pure and good; in short, nothing was wanting so far as appearances were concerned. Without waiting for any formal report, I shall give you the substance of Mr. Mason’s remarks.

The paper (albumen) was floated as usual on a 45-grain bath and dried; then floated for two to three minutes upon water; after which upon an acid solution of water, as follows: water, 4 gallons; hydrochloric acid, 1 ounce; when dry put away into a drawer which was light tight. Of such paper, prepared thirteen months since, some of the exhibited prints were this day (May 2d) printed.

Mr. Mason was of the opinion that less acid would answer, probably one-quarter of above proportions, or just enough to produce an acid condition of the chloride of silver upon the paper. He stated that such paper would also keep well for a week after printing and before toning.

Before printing fume well, longer than for the ordinary silvered paper; also fume the pads placed in printing-frames behind sensitized paper. Carbonate of ammonia he prefers to liquor ammonia. The paper, simply washed in water, he had found to keep reasonably well for about thirty days.

Mr. Newton exhibited some prints upon paper very highly glazed; that is to say the paper is prepared with a surface as glassy and smooth as a mirror; upon this surface the albumen is floated after the usual plan, and treated regularly.

If it be desired to have a surface of the kind named, then this process is just the thing; it presents all the gloss of the mica paper, without any of its faults in cracking or splitting.

Inasmuch as the photographic event of the year, that is the opening of the National Photographic Association Exhibition on the 6th of June, falls upon the same day as our regular meeting, and as we *rather* wish to witness it, and believing that the Association would not change its day (for want of proper notice) we magnanimously concluded to change ours to the 13th, and shall be on hand in the goodly city of Brotherly Love to see how “things are.”

It seems quite like the good old days to again write you my monthly letter. I hope it may be long ’ere I miss again.

Yours, as ever,

C. W. H.

German Photographic Society of New York.

THE general monthly meeting of this Society was held May 5th, at 28 Stanton St., President, W. Kurtz, in the chair.

Minutes of the last meeting were read and approved.

The chairman read a letter from Mr. Richard Wazl, Baltimore, returning the Society the amount of subscription for the *Photographers' Friend*, and offering the services of his Journal gratis for any communication or advertisement in the interest of the Society. The Secretary was instructed to express our best thanks to Mr. Wazl for his liberality.

Dr. Vogel had sent a stereoscopic picture of a piece of machinery made by one tube, and without changing the position of the camera. It has an excellent stereoscopic effect; both pictures fall together at the first glance through a stereoscope. It has been made, as Dr. Vogel has already explained in his April correspondence in the *Philadelphia Photographer*, by using a three-inch short focus tube, and covering alternately about three-quarters of the opening. Of course no live photographer will think of taking his stereoscopes that way, but it is an interesting experiment, showing what can be done.

Mr. Sladtky exhibited three prints from the same negative; the paper for the first print was treated in the usual way; for the second one it was washed right after silvering, and for the third it was washed after letting the silver dry first. The first one gave the most pleasing results, it showed clearness and depth in the shadows; the second was rather flat; the third not much better. Notwithstanding the favorable reports from Europe about washed paper, the old way seems still to be the best; more experiments, however, will soon decide the point.

Messrs. Levin, Schoem, Loehr, and Trapp had made a photographic excursion to the German gunboat "Meteor," now lying in our harbor. As fruits of their trip they presented the Society with a number of stereoscopic prints, representing the crew engaged in their different work about the vessel, as also in their respective positions

when in action. The thanks of the Society was voted to the above-named gentlemen.

Mr. Loer exhibited a new style 8 x 10 rim box. It is a novel construction; makes it very easy for transportation, and notwithstanding the weight being less than an ordinary 4 x 4 box, it is perfectly steady and firm. The peculiarity of construction lies in the bellows being funnel-shaped, tapering towards the front piece, and when detached from the latter, you can put bellows, front pieces, and a platform, which supports the former, snugly away in the rear part of the box. This latter part, when ready for work, is screwed to a tripod, and you focus by turning a small crank, thereby moving a platform with the front pieces fastened to it. The focal length is from 4 to 21 inches; the box has got a double swing-back.

After criticizing a lot of photographs brought by different members the meeting adjourned.

EDWARD BOETTCHER,
Secretary.

PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.

THE stated meeting was held May 3d, 1871; the President in the chair. The minutes of the last meeting were approved, the reading, being on motion, dispensed with.

Mr. Tilghman submitted some specimens of engraving on glass, prepared by the beautiful sand process of his brother, Mr. B. C. Tilghman, so well described in the March number of the Franklin Institute Journal. A bichromatized gelatine negative is taken on glass from an engraving. This is then subjected to a stream of sand under a pressure of one to four inches of water. The gelatine film protects the glass, the parts not covered by it being cut by the sand. The process is complete in from three to ten minutes. The finest specimens are produced by using fine sifted sand at about one inch pressure, and a longer time of exposure. It is evident that the negative must be taken from an engraving to afford perfect contrasts of light and shade.

Mr. Edward L. Wilson suggested that the process might be used to advantage in

the manufacture of fine ground-glass for photographic purposes, an article difficult to obtain in the market of proper quality. Mr. Wilson alluded to Mr. Baker's article on "Photography by Moonlight," published in the May number of the *Photographer*, and exhibited some specimens actually taken by moonlight, the artist being Mr. Ogier, of Jersey (Channel Island). Mr. Wilson also showed some excellent views of Mount Cenis Tunnel and Railway, by Col. O. Barratti, of Italy. They were quite interesting from the fact of the negatives having been taken by the coffee dry process, and the pictures certainly spoke well for that method.

Mr. Carbutt exhibited some glass positives taken from his own negatives by Mr. Bell, by the gum and coffee process of M. de Constant. The President remarked that they were the finest transparencies he had seen, and he thought they deserved an honorable mention.

After adjournment, the pictures were exhibited in the Sciopicon, and called forth universal expressions of commendation.

JOSEPH M. WILSON,
Recording Secretary pro tem.

PENNSYLVANIA PHOTOGRAPHIC ASSOCIATION.

THE stated meeting of the Pennsylvania Photographic Association was held at the store of Messrs. Wilson, Hood & Co., 822 Arch Street, Philadelphia, Monday evening, May 8th, 1871; the President, Mr. Wm. H. Rhoads, in the chair, and over forty members present. Messrs. John L. Gihon, J. C. Steinman, Henry F. Lowe, J. C. Richter, and William Valk, were elected members of the Association.

The Executive Committee reported having sent a circular, inviting every one they could think of in the city and vicinity, interested in photography, to take part in the coming Exhibition.

The President stated that the members of the Association would be supplied with their badges in good time at Horticultural Hall.

The Committee on raising funds for Mr. C. C. Schoonmaker, reported \$155.50 in

hand, and they were directed to remit it to him at once.

Mr. Wilson stated the opportunity the coming Exhibition would give to the photographers of Philadelphia to earn themselves a good name in the craft and to make public their best work—an opportunity such as they would not have again until 1876. He also stated that it would be necessary for the Local Secretary to have assistance at the Hall in arranging the pictures, and he called upon all who could spare the time to volunteer for day and night service, so the Local Secretary could call upon them when needed.

The following volunteers responded at once. For day service, Messrs. Moore, Quimby, Clemons, Rau, Marston, Richter, Carbutt, Heffner, Smith, H. Chillman, Seeler, Phillips, E. L. Wilson, Hagaman, Rhoads, Robinson, Trask, Hood, W. D. H. Wilson, Snyder, Chandler, Valk, Seeler, Faser, Cremer, Clemons, Jr., and Saylor.

For evening service, all the above, and Messrs. Gilbert, Schreiber, Snyder, Evans, Gihon, Krips, Taylor, Bruce, Lovejoy, Booth, E. Chillman, Lothrop, Walker, Steinman, Sims, Shoemaker, Chute, and Harmon. Others agreed to assist when possible.

The President then appointed as the Committee on Hanging, Messrs. Faser, Trask, Cremer, Rau, Gilbert, Schreiber, Hagaman, Evans, Gihon, Lothrop, Seeler, Quimby, Phillips, Carbutt, and Smith.

As the Committee on Reception of Visitors, Messrs. Carbutt, Hood, Clemons, Trask, Krips, Robinson, Snyder, and Saylor.

The members of the Association will wear their badges of blue silk, with the gilt monogram of the Association thereon, on their coats, so that they may be recognized by photographers coming from other places. Any photographer may feel free to call upon them without introduction.

Papers were then read *On Porcelain Printing*, by Mr. G. Schreiber, and *On the Bath*, by Mr. S. M. Robinson, both of which gentlemen were given a vote of thanks.

Messrs. Chute and E. Chillman were appointed to read papers at the next meeting.

A letter was announced from Mr. J. Q.

A. Tresize, Springfield, Illinois, one of the members of the Association, together with some examples of his work.

Mr. Tresize spoke of the pleasure he had had in visiting the Association and its members a few months ago, and expressed his intention of seeing them again in June. He also favored Mr. Trask's ideas of apprenticeship, and believes that some such system must be organized.

Mr. Trask exhibited some handsome show cards he was having made by Messrs. A. M. Collins, Son & Co., for his exhibition pictures.

After some conversation the meeting closed to witness a novel experiment by Mr. Carbutt. Mr. Carbutt first printed a glass positive on a dry plate by means of magnesium light, and then developed it in the lantern, thus showing on the screen the process of development, and also the fixing of the plate. It was a very striking experiment. A positive made of Dr. Vogel was very good and received with applause. The meeting terminated with an exhibition of glass slides in Mr. Marey's Sciopticon.

PORCELAIN PICTURES.*

BY G. SCHREIBER.

IN presenting my paper to the Association this evening I do not pretend to give any new process, but simply to tell what my experience has been in making porcelain pictures, or more properly speaking collodio-chloride pictures on opal glass. I use the collodio-chloride process in preference. The first essential is to have the right quality of glass, the neglect of which I think has given the most trouble where the parties have not taken the pains to look into the matter. I find one material will give a flat poor picture, while the other will give me the desired effect. You can see from the specimens I have brought, which were made both from the same negative and with the same mixture.

If I have a negative that is rather intense I use the albumen thinner, which works very well. In toning porcelains particular care ought to be taken that the toning does not proceed too quickly. It ought to take at least five minutes.

The collodion is made as follows:

Alcohol and Ether, . . .	Equal parts.
Collodion,	1 oz.
Cotton,	4 gr. to the oz.
Chloride of Strontium, . .	2 grains.
Nitrate of Uranium, . .	1 grain.
Citric Acid,	1 "
Silver,	5 grains.

I mix it as follows:

Take a clean 6 oz. bottle—I generally make about 4 oz. at a time—weigh off the uranium and strontium, put them into a mortar, and dissolve them in the smallest quantity of water, and add the alcohol, which is put in the bottle and well shaken. When you find it all dissolved add your cotton, then add your ether and shake again until your cotton is all taken up. All this can be done in the light. Now put your silver in the mortar, pulverize, and dissolve it in the smallest quantity of water. When dissolved add a few drops of alcohol, after which add it to the collodion. This operation must be done very carefully, adding the silver drop by drop, and keep shaking while adding. I am merely giving these hints to parties that are inexperienced in this particular. After this is done add your citric acid, which first dissolve in a little alcohol. Add in the same way as the silver. This can be used in half an hour after it is made.

In having a picture to over-print for you, which sometimes happens, and you don't like to throw it away, you can immerse it in the soda first and then tone it. It works very well.

Any toning bath will do; what I generally use is after the paper prints have been toned. I weaken it about four times, which leaves it plenty strong enough.

Any further information that I may have omitted, I will gladly give to any of the members wishing it.

The Cause of Pinholes in Negatives not the Bath Solution.*

BY S. M. ROBINSON.

MR. PRESIDENT AND GENTLEMEN: The last monthly meeting was the one at which I was appointed to read a paper; being

* Read at the May meeting of the Pennsylvania Photographic Association.

absent on business, I could not fulfil the duty.

Within the month our worthy and esteemed friend, J. W. Black, of Boston, has reported a bath so different from anything ever before used that I present this with much timidity, as being nothing new.

I will call this my experience. That the bath has been accused of too many shortcomings is my belief. That is, the negative depends wholly, or nearly so, on the bath; that the pinholes, linings, and the many defects we see in the negatives are the fault of the silver solution.

The precipitation of iodide I would call particular attention to. O'Neil says when the bath is at 50, and shows an excess of iodide, it should be precipitated. I think the bath will never show excess of iodide at that strength. As 40 to 45 is the strength used, 50 grains would show pinholes from lack rather than an excess.

In F. Gutekunst's gallery, 712 Arch Street, I had entire charge of the dark-room from September last to March. We had three baths in constant use, one holding four gallons, the others two gallons each. I cannot tell the number of plates dipped, but it was necessary to boil the small ones every other night, and the large one at least once a week. The iodide was never precipitated during that time.

It is a mistaken idea, *excess of iodide in a bath*. I claim it is not possible when it is kept up to the original or proper strength, and that pinholes "from excess of iodide" are only the surest indication of weakness. In this condition of the bath it is recommended by some to add one-third water, filter; boil; if necessary, add silver to make it the proper strength again. The result is hard negatives; the film will be blue, and of course lack sensitiveness. The iodide which *should* be in the bath, is taken from the collodion until the proper quantity is again replaced.

So long as the bath is up to strength and free from alcohol and ether (absorbed from the collodion) it will make good negatives. The more quiet the bath is kept the better. Too much fixing makes matters worse. If a bath needs filtering every night, it is the

fault of the holder or of the careless operator. The remedy suggests itself.

My theory is, have a proper vessel for holding the solution; use pure water and silver, thoroughly saturated with iodide; a drop or two of nitric acid, then with care you bid defiance to pinholes and the many other faults the bath is blamed for. You will now ask, Does your bath never get out of order? Are you able to make negatives in the same bath continually without faults? I answer, No. After a time, like our own system that has been overtaxed, it will give out. The bath will become acid, and foreign matter will get into it. Then it must be neutralized, boiled, and set in the sun for a number of days, when it will separate, and the deleterious matter will go to the bottom. Filter, and it is ready for work again.

The best thing I have ever used for neutralizing is cyanide of silver. Mr. Bell has given a formulæ for it. It is what a blue pill is to a torpid liver. *It cleanses thoroughly.*

On Photographic Subjects.

I. APPEARANCE AND PRINTING CHARACTER OF NEGATIVES.

IN some remarks which I lately published upon the great variety which exists in color and texture of negative films, I spoke especially of the tendency shown by a certain class of negatives to give very good prints. This communication has given rise to a good many remarks, most of them, but not all, agreeing with the views that I expressed. I noticed, however, that those who commented upon my communication, seemed to rest upon the question of color, whereas I attached quite as much or more importance to the *texture*, and spoke particularly of the appearance of a certain class of negatives in which the deposit was so fine as to work almost as if the material had been mixed up with varnish. This appearance is most commonly connected with a cream-colored film, though by no means all such films show it. This texture gives hopes of excellent printing qualities and soft velvety effects that are very satisfying.

The writer of "Echoes of the Month," in the *Photographic News*, whilst agreeing

with me as to the value of these characteristics, differs from me as to their cause, or rather as to the cause from which the opposite character of negatives is got, the white granular sort. I attribute this fault commonly to there being an excess of bromide in the collodion. The photographer just referred to ascribes this white granularity to insufficient exposure, and is of opinion that a simple increase of exposure is sufficient to remove this trouble. Of course, other causes are competent to produce this white granularity, and I specially referred in my remarks to one well-known cause of it, viz., too much acidity of the negative bath. Supposing, however, that this cause is absent and that the bath is known to be in excellent order, the question becomes narrowed down to that of collodion and of exposure.

It would, I think, be interesting to compare on this subject the experience of a larger number of observers. My own experience has been strikingly confirmatory of the views which I express, but that of others may be different, and certainly has been in the case of the writer of the Echoes. I never was but once seriously annoyed with this white granularity, and that was several years since. Perhaps it may be of interest to cite the case.

I made at that time a series of views on 8 x 10 plates with wet collodion, perhaps a dozen or twenty in number, and without printing any of them until some time after. I exposed them fully; if anything, I rather over than under-exposed them; they mostly flashed up quickly under the developer, although not so very quickly as to threaten injurious flatness. The bath was in excellent order; moreover, I was using the two-bath system, in which excellent method of operating, the bath solution on the plate at time of development is always pure. The plates were gray and crystalline, granular in appearance, nevertheless, in technical character they were extremely good, so much so as to have quite impressed an old and experienced photographer who looked over them. Nevertheless, the printing was disappointing. The prints wanted pluck and spirit; it was difficult to say what was the matter with them; they would pass

muster pretty fairly, but were not what was expected of the negatives. Most undoubtedly the fault was not in under-exposure.

It has seemed to me that a fine creamy deposit comes most easily with a collodion containing from one to one and a half grains of bromide to the ounce, and that when we get up to two and a half or three, we tend more to crystalline deposits. There is, however, certainly more to be learned about this matter than is now well understood, and a completer knowledge would be very valuable.

In this connection an interesting speculation occurs to me, which I have not time to follow up by experiment, but will suggest here. Certain saline solutions added to the developer have, as is well known, a tendency to whiten the deposit, and this fact has been often applied in making ambrotypes. Now, in a negative bath that has been for some time in use, there is a continually increasing quantity of saline substances in solution, nitrates of all the bases used in making the collodion. Thus, in the case of a bath that has been for some time in use with some one particular collodion, the character of the salting in that collodion may tend to qualify the action of the developer, exactly as if the nitrates of the bases used in the collodion had been introduced into the developer.

II. COLLODIO-BROMIDE PROCESS.

I notice that *washed ether* is advertised for use in this process, and this leads me to remark especially, that both the ether and alcohol used in the collodion for this process should be of very high grade. The least wateriness of the collodion tends to make it difficult to get a smooth and even film; the coat exhibits a tendency to mottle, especially at the corner at which it is poured off.

Washed ether is therefore unsuitable. In the washing, the ether is much purified, if it contains foreign ingredients, but it takes up about a tenth of its bulk of water, and this addition of water would be most objectionable in working. "Concentrated" ether is the proper sort.



GOSSIP.

THE Executive Committee of the National Photographic Association are requested to meet at the Continental Hotel, Philadelphia, on Monday, June 5th, 1871, at 3 P.M., to frame their annual report and to transact other important business. By order of the Chairman,

EDWARD L. WILSON,
Secretary.

W. IRVING ADAMS,
Chairman.

A. BOGARDUS,
V. M. WILCOX,
E. L. ALLEN,
W. J. BAKER,
J. CARBUTT,
Executive Committee.

Committee on the Progress of Photography.—J. C. Browne, Chairman; G. Wharton Simpson, Dr. H. Vogel, G. H. Loomis, J. M. Blake, Prof. J. Towler, J. H. Fitzgibbon.

Committee on Apprenticeship.—A. K. P. Trask, Chairman; D. Bendann, J. H. Fitzgibbon, E. Decker, J. C. Potter.

Committee on Relief Fund.—H. T. Anthony, Chairman; A. Moore, D. K. Cady, W. Irving Adams, B. French, J. C. Potter.

Committee on Scovill and Holmes Medals.—M. Carey Lea, Chairman; L. M. Rutherford, Charles Wager Hull, H. J. Newton, Prof. Henry Morton, J. C. Browne, Edward L. Wilson.

The above committees are requested to organize previous to the meetings of the Association, and to prepare their reports in full, by order of the Executive Committee.

ONE OF MANY.—Mr. H. D. Marks, of Rochester, N. Y., writes: "It is my intention to be present at the Exhibition in Philadelphia, and I am satisfied I made a mistake in not being at Cleveland last year."

MR. L. W. SEAVEY, No. 684 Broadway, N. Y., is preparing a handsome and elabo-

rate curtain to hang across the stage at Horticultural Hall during the Exhibition, which will attract a great deal of attention. It will be original in design, and illustrate a great many points that will be new.

PARTIES who have not received a copy of the *arrangements* circular, issued May 12th, may get copies of the Permanent Secretary.

Please note changes below, made in the railroad schedule, since the circular was issued.

The following Railroad Companies grant the extra privilege to photographers attending the Exhibition, of bringing along their wives or members of their family, and the Permanent Secretary will issue orders for tickets accordingly.

Pennsylvania Central; Pittsburg, Fort Wayne and Chicago; "Pan Handle;" Pittsburg and Cleveland; Philadelphia and Erie; Northern Central, and N. J. RR. Co.

See the notice of the Chicago Photographic Association in Specialties.

Messrs. P. Smith & Co., Cincinnati, Ohio, will supply ticket orders from Cincinnati.

Photographers paying full fare from San Francisco to Omaha, via Central Pacific and Northern Pacific Railroad, will receive a certificate in Philadelphia, permitting them to get return ticket from Omaha to San Francisco free.

Tickets in New York via New Jersey Railroad and Transportation Co., are obtained by order at the foot of Desbrosses Street, and not at the foot of Courtlandt Street, as stated in the circular. The orders for tickets may be obtained of President Bogardus, 1153 Broadway, New York; of E. & H. T. Anthony & Co., 591 Broadway, New York, or of Scovill Manufacturing Co., New York, as well as from the Permanent Secretary.

No. 4. The Pittg., Cin. and St. L. RR. Co. also sell tickets at Indianapolis, on orders.

No. 26. On circular, runs from Quincy, Illinois, to Chicago, and also from Keokuk and Burlington, Iowa to Chicago.

Reading RR. sell excursion tickets $1\frac{1}{3}$ fare.

Lehigh Valley RR. sell excursion tickets at single fare.

Editor's Table.

THE PHOTOGRAPHIC WORLD for May contains a double example of the *new Victoria card*; a double example of the beautiful *Holyoake card*, and two portraits of the same person, to illustrate light and pose, together with the following articles: The Purpose and the Limit of Retouching; Iron and Potassium as Reagents; Organic Matter in the Developer; The Nature of the Bromine Salts; Vignette Portraits—How to Light and how to Print them; How to Enamel Mounted Photographs; Rents, Ridges, and Ruptures; Photographing the Invisible; Waterproof Paper; Keeping Sensitive Albumenized Paper; Camphor in Collodion; Developing Tray; Position and Composition; Scene in a Photograph Gallery, South; On the Retouching of Negatives; Splashes of Silver; Extracts from Dr. Vogel's Handbook; Renovating Old Baths; Which is the best Lens; Photographic Crayons; Big Growls from a Little City; Chicago Photographic Association; On Camera Stands; Hydrate of Chloral; Our Picture; All the World Over; Wrinkles and Dodges; Table Talk, and Editor's Table.

SHORTCOMINGS AND BREVITIES.

DOESN'T our Magazine look as gay as a Christmas tree this month? It is in honor of the coming Exhibition.

SPHYNX cannot speak this month for want of space. Next time.

ZEBRA CARDS are creating a sensation by their beauty and novelty.

Don't fail to visit the Exhibition.

"TO MY PATRONS" has reached its twenty-fifth thousand. Get a copy and read it.

HOW TO PAINT IN OIL, and in everything else Mr. Ayres will tell in his 3d edition. Out soon.

DR. VOGEL'S HANDBOOK.—Nearly one thousand already doing good throughout the land.

ROCHESTER and its good people must wait a month before we can tell of what we saw there.

FULL of excellence is Mr. Albert Moore's little pamphlet, telling how to make solar negatives, and the prices of printing therefrom.

THE *Saginaw Art Journal* is published by Messrs. Armstrong & Rudd, photographers, Saginaw, Mich., and is a spicy, sensible, little paper.

THE California enamelling process is exposed in the May *World* fully.

MR. DAVID DUNCAN, one of our contributors,

died in New York last March. Full particulars in our next *World*.

DR. VOGEL's correspondence arrived too late this month. It will appear in the June *World*, which will be out during the Exhibition.

MR. C. C. SCHOONMAKER has sent us an important communication concerning the "final act in the Sliding-Box case." See next *World*.

RECEIVED.—From Mr. Edward Boettcher, Secretary of the German Photographic Society, New York, his portrait, for which we return our thanks. Thanks also to Messrs. Austen & Oliver, Oswego, N. Y., for a beautiful cabinet of a young Miss; to Mr. E. A. Kusel, Oroville, Cal., for cards of babies; to Mr. W. E. Bowman, the indefatigable, for a photograph of Horace Greeley's celebrated letter to Mr. Bowman as Secretary of La Salle County Fair; also photographs of "three Ottawa infants" whose aggregate weight is 780 pounds, and of Mr. Charles W. Stevens, the active stockdealer of Chicago; to Messrs. Slee Bros., Poughkeepsie, N. Y., for a large number of admirable pictures, showing great delicacy and softness; among others are portraits of Mr. W. P. Slee, the inventor of Slee's Prepared Card Mounts, and of Mr. W. T. Kidney, the operator. The whole batch is excellent. The light they are made in must be a fine one, and these gentlemen assuredly know how to manage it well; to Mr. Warren Wykes, Grand Rapids, Mich., for some admirable cards and cabinets, showing him to be an excellent photographer, and a very tasteful poser. The printing is also admirably done; to Messrs. Davis Bros., Portsmouth, N. H., for some excellent pictures. These gentlemen are evidently striving to make the best of work; to Mr. Well G. Singhi, Waverly, N. Y., for many prints. He stands high as an artist at home; to Mr. J. H. Reed, Fulton, Ills., for examples of his photographic work and ferrotypes, far ahead of the average; to Mr. M. M. Griswold, Lancaster, Ohio, for "B stands for Bumble-bee," a very good "composition" picture; to Mr. Z. P. McMillan, Galesburg, Ills., for some capital pictures of the best quality. Really we haven't had the pleasure for a long time of seeing so many *good* pictures as those noticed above. It is refreshing and encouraging.

BE sure to attend the Exhibition. It will pay.



Boston Public Library.

GIHON & THOMPSON.

812 ARCH STREET, PHILA.



T H E

Philadelphia Photographer.

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In the office of the Librarian of Congress, at Washington, D. C.

The Exhibition and Meetings of the National Photographic Association.

As usual, we devote the major portion of our space this month to a report of the proceedings of the annual session of the National Photographic Association. Being tied continually to the desk as the Secretary, or on committees of various kinds, we had not the opportunity of so much enjoyment as others, or of seeing fully how others enjoyed and profited by the occasion. Yet we are assured by very many who were there that they were "glad they came," and that "hundreds of dollars would not remunerate them for the loss of what they heard and saw and learned in Philadelphia."

Of this we are very glad, for we know that our very worthy Local Secretary, Mr. William H. Rhoads, did all in his power to make the occasion fulfil the expectations of the most exacting. We trust that if any feel they did not receive as much attention as they desired, that they will have charity for the shortcomings of the secretaries, whose coat-tails were continually pulled during the Exhibition, and who could hardly walk five feet without a stoppage on the way.

The meetings of the Association were generally characterized by good feeling and harmony, nothing of any importance occurring to make it otherwise. The rou-

tine business was quickly transacted in most cases, and a great portion of the time devoted to thoroughly *practical* matters pertaining to the production of good work.

This was a good sign, and we shall endeavor to follow with as good a report as possible. The papers read will be found admirable and full of instruction, and as President Bogardus stated, it is a great thing to see eminent photographers come out and voluntarily *give* of their knowledge to others, when only a few years ago they all tried to see how much they could *keep away* from their co-workers. These happy changes are being wrought by the National Photographic Association, and who shall say it is not doing a good work, and who is there that may not give it their hearty support and encouragement?

The Exhibition was without doubt the finest one ever held in this country. It did not cover as much space as the one at Cleveland, but it displayed more fine pictures, and fewer poor ones. Those who stood front last year maintain their positions, and do still better; and there are others who have stepped up beside them, claiming equal rank. The number of first-class workers is much swollen, and they still increase. The Association exhibitions have awakened their ambition, and it is astonishing how rapidly some photographers improve.

Two years ago, in Boston, some foreign pictures were exhibited that excited the envy and the ambition of a good many photographers. These pictures were considered superior to any work made in this country. They were hung in the Exhibition at Philadelphia, and it astonished those who first coveted their good qualities to see how far they had been eclipsed by dozens who once thought they never could reach them. Without our Annual Exhibitions this would not be, and we should all be going backward continually, or standing still.

The Philadelphia Exhibition taught some very plain lessons also, and those who are wise enough and bright enough to understand them, will go to St. Louis next May with examples of their work that they now hardly feel able to produce. Let us all try to be there to see this prediction verified.

PROCEEDINGS

OF THE

National Photographic Association of the United States.

THE Third Annual Convention of the National Photographic Association of the United States, was opened Wednesday, June 7th, 1871, at 10 A. M., in the lecture-room of Horticultural Hall, Philadelphia. President Abraham Bogardus was in the chair, and called the Convention to order in the following words:

"One year ago we adjourned from the city of Cleveland to meet to-day in the city of Philadelphia, and pursuant to that adjournment we now meet, and I take great pleasure in calling the National Photographic Convention of the United States to order." [Applause.]

Mr. W. H. Rhoads, the Local Secretary, delivered a speech of welcome to the delegates, as follows:

MR. PRESIDENT, OFFICERS, AND MEMBERS OF THE NATIONAL PHOTOGRAPHIC ASSOCIATION.

It is with pleasure that I meet you here on this the third anniversary of our union. I congratulate you on our meeting here to-day. I think we have great cause to be proud of our union, and that we can safely say that we are firmly established, and that the National Photographic Association is a decided success. Who

would have thought three years ago, when this Association was formed in this city, that we would have assumed the great proportions we have. When a few of the leading spirits of this Association, led by our noble President and our worthy Permanent Secretary, met at Franklin Institute, but few thought it would have been a success; but to-day we can say that we have been successful, that we are established on a firm basis, and that the permanency of the union is beyond question. It is unnecessary for me to tell you what good has been done. Who of you has not been profited? Is there one but what is a better photographer than he was three years ago? I for one can say that my association with you has been of great benefit to me, and would not be willing to exchange my membership for a large sum.

Gentlemen, I hope that our Exhibition may be successful. We have great cause to rejoice that we have been so successful heretofore, and it remains to be seen if our present undertaking is a success or not. I hope no one will return to his home and regret his coming to Philadelphia. This is a pleasant city, and I hope you will all find it as such.

We have prepared entertainments for you which you will be pleased with I doubt not.

Now, gentlemen, as Local Secretary of the National Photographic Association, I welcome you. In the name of the Pennsylvania Photographic Association, I greet you, and as a citizen of Philadelphia, I heartily welcome you, hoping you may have a pleasant time while you are with us, and not regret your visit to the City of Brotherly Love.

President Bogardus replied as follows:

"BROTHERS AND GENTLEMEN OF PHILADELPHIA: Coming as we do from all parts of our country, representing almost every state in the Union, and possessing different degrees of advancement in our art, we come before you as earnest working-men. We come feeling we have a duty to do, and a work to perform. We come feeling that ours is not a sinecure, that ours is not a trifling work, but feeling that photography is destined to be far in advance of what it is to-day; we come claiming we have done something, and you will agree with me that the work shown to-day is far in advance of what was shown last year. And I have yet to find the man who is a member of this Association and who has really advanced in his work, but what is willing to give some

credit to the National Photographic Association. [Applause.]

"We have heard a great many complaints, as there will be in every society, and have heard slurs that the Association was formed for this purpose, and that. I am one who helped to form the Association, and I have worked to sustain it, and I work to-day to sustain it for the good of the photographers of the United States and for no other body of men under the sun. Just as soon as the Association is no benefit to the photographers of the United States, I am no longer a member of it. But I say, gentlemen, just as I felt the day we organized, we can work better together than we can alone. You all remember when we used to fight one another, and how one was afraid to let another go into his dark-room for fear he would see or steal something. 'In union there is strength,' and this Association has proved it to us all. [Applause.]

"We propose to make this meeting just as practical as we can. I have got no long speeches to make. The Constitution requires me to deliver an Annual Address, which I shall do at the proper time. Let us make this meeting practical, for if there is one thing one man is posted on, that same thing another man may not be posted on, and so the other way. The reading of the minutes of the last meeting is now in order."

The minutes of the last Convention were read by Mr. Edward L. Wilson, of Philadelphia, Permanent Secretary, and approved.

On motion of Mr. Wilson, the calling of the roll was deferred until later in the day, on account of some members not having yet arrived.

The Secretary read a number of communications from members who were unable to be present, among them:

One from Mr. W. H. Rulofson, of San Francisco, inviting the Association to adjourn to that city, promising to kill the fatted calf if they would, and which was greeted with laughter and applause.

One from Hon. D. M. Fox, Mayor of the city, regretting his inability to be present at the reception in the afternoon.

One from Dr. H. Vogel, of Berlin, Prussia, as follows:

BERLIN, May 18th, 1871.

To the National Photographic Association of the United States convened in Philadelphia.

MR. PRESIDENT AND GENTLEMEN: A year has elapsed since I left Europe and sailed for the United States in order to follow your invitation and attend the Cleveland Convention. I remember with gratitude and pleasure the hearty hospitality with which I was received, and the mass of wonders which crowded upon me in all the branches of industry, for during my stay with you they met my wandering eyes on all sides.

It is not the first time that I mention this; I have proclaimed over and over again throughout Germany that I have learned to admire American photography, and I am happy that I have been able to contribute my share towards getting the works of American photographers appreciated in Europe.

The more intimate intercourse between America and new-born Germany will give to our young art an ever increasing impulse.

That this union will become closer and closer is proved by the welcome tendered to those Germans who now proudly call themselves citizens of the United States, and by the sympathy of the American people for truth.

I close, hoping that the labors of the present Convention will prove as beneficial to our art as those of the last.

Respectfully,

DR. H. VOGEL (Berlin),

Honorary member of the

U. S. National Photographic Association.

President Bogardus: Dr. Vogel has sent me a letter in which he says: "The more I think of the pleasant time I had in America the more it makes me homesick for America." [Applause.]

The Permanent Secretary also read a communication from Mr. C. C. Schoonmaker, of Troy, N. Y., as follows:

TROY, June 3d, 1871.

DEAR SIR: I am sorry to inform you at this last hour, when all my arrangements are made to meet with the National Photographic Association, that I have had a mishap with one of my feet which will deprive me of locomotion for at least eight or ten days. There seems to be a fatality attached to my meeting with our Association.

Please extend for me to the Association my

congratulations on their success, and I may say here that the Bromide swindle has proved a blessing in disguise. The efforts of the owners to fasten that imposition on the fraternity has proved the greatest blessing that can fall upon the photographers. It has united and awakened them to their duty, they have not only crushed that swindle, but established a society which, with proper direction, will prove of incalculable blessing to every one connected with the Association.

Please say to the photographers that the Wing Sliding Plate-holder Patent is *dead, dead*. Wing, and his co-laborer, Mr. Southworth, to the contrary notwithstanding.

Mr. Wing's story is, that he intended to get the case reargued before the Supreme Court adjourns (something he never could have done without corrupting the court); that last chance has passed, the court has adjourned, the decision has been entered and sent back to the Circuit Court here, where it was tried first, and docketed, as being confirmed by the highest tribunal in the land, and is now fixed fast as the earth we tread on, and no human power can ever overturn it.

So let Mr. Wing or any of his agents try to collect for infringements if they dare anywhere in the United States. No longer than yesterday, I was told by parties who are intimate with Wing that he was making efforts to collect in the Eastern States for infringements, saying to the photographers that my decision only affected his patent in New York. Let them be told that the Supreme Court is the supreme court of all the United States of America, including the Territories, and that if once Wing or his agents attempt to collect for this worthless swindle, to arrest them for getting money under false pretence. Pretending to have a good and valid patent, which has been declared invalid by the highest court in the land would be such.

Very truly yours,

C. C. SCHOONMAKER.

P. S.—Please read to the photographers the decision or mandate to the inferior court of the Supreme Court as sent you.*

Mr. Southworth, of Boston.—I will answer that letter at a proper time before the Association, before we adjourn.

President Bogardus.—The next thing in order is the report of our Treasurer, Mr. Moore.

The Treasurer, Mr. Albert Moore, made is report. Balance in treasury, \$1386.98.

The following Committee was appointed to audit the Treasurer's report: I. B. Webster, J. H. Fitzgibbon, G. H. Loomis, P. B. Jones, J. F. Ryder.

The committee retired, and after examining the report, returned it with the following indorsement: "We, the Auditing Committee, report we have found the foregoing report correct." Signed by all the committee.

The Permanent Secretary then read the report of the Executive Committee, as follows:

To the Officers and Members of the National Photographic Association of the United States, in session at Philadelphia, Pennsylvania, June, A. D. 1871:

GENTLEMEN: Your Executive Committee beg to submit the following as their Annual Report:

During the Association year, we have held twelve special and stated meetings. We organized in Cleveland, Ohio, June 10th, 1870, and elected Mr. W. Irving Adams as Chairman, and Mr. Edward L. Wilson as Secretary, of our Committee. It was there agreed that three should constitute a quorum, yet at no meeting of the Committee, with but one exception, have less than four members been present. It was resolved that regular quarterly meetings be held, and special meetings whenever emergency occurred, at the call of the chairman.

At the special meeting July, 6th, 1870, an address was read from the "Berlin Society for the Advancement of Photography," which was intended to have been read at the Cleveland meeting, but was received too late. It was handsomely transcribed, and as it has been published, by order of this Committee, in the organ of the Association, you have doubtless all read it, together with the response which we made thereto in your name; our response was elegantly written and signed by every member of our Committee, to secure which it had to travel some thousands of miles before it could be sent to Berlin.

As our proceedings have generally been published, we need only detain you with a brief synopsis of what we have done.

About one hundred and thirty dollars only were drawn from the treasury to cancel the indebtedness in the matter of litigations in the Bromide and Shaw & Wilcox suits last year, the whole of the balance having been made up by your generous and voluntary contributions, much to the relief of your Executive Committee.

* See page 133, *Photographic World*, June, 1871.

E. Y. Bell, Esq., was formally retained by the Committee as your legal counsel, agreeably to your vote at the Cleveland meeting, for the sum of \$100 for the year.

The Local Secretary, at Cleveland, Mr. Ryder, reported his total receipts at \$1198.55, and expenditures \$1071.37, leaving a balance of \$127.18, to place in the treasury, and some unsold lumber. This report was accepted as "particularly gratifying and satisfactory."

At the quarterly meeting, August 1st, 1870, Mr. Bogardus stated that he had been sued by Jehyleman Shaw for infringement of his patent; and that he had engaged Mr. Bell in his defence.

This case is yet pending in the courts, as well as several other suits against the members of the Association.

The Treasurer reported over \$1000 balance in the treasury, and was instructed to place it at interest in some reliable Saving Fund, which he accordingly did.

At our October meeting a monogram trademark was adopted, and our Secretary appointed as a committee of one to have it supplied to each member of the Association, together with a steel plate certificate of membership, which instructions were promptly carried out.

The Secretary was authorized to invite the most eminent photographers in Europe to take part in our 1871 Exhibition.

In December the matter of the Solar Camera Patent was brought up, and the Secretary was directed to employ H. Howson, Esq., to examine and report if the patent extension could successfully be resisted.

Mr. Howson reported that it could not be resisted without great expense, and probably not then with success. Your committee thereupon employed Mr. Howson, to be in attendance at the hearing, and to see that the interests of the Association were carefully attended to; first, however, having entered a protest against the extension.

The result you know; the patent was extended, but somewhat modified by the disclaimers of the patentee.

In May our meeting was held in Philadelphia, to examine the proceedings of our very worthy and efficient Local Secretary, Mr. William H. Rhoads, and we are happy to say that we have approved of his actions in every respect.

The Exhibition and the arrangements now made plain to you, will give you opportunity to judge whether our actions in this respect are satisfactory or not.

At our first meeting we found that no record had been kept by our predecessors. Our Secre-

tary was accordingly instructed to procure a record-book, write up the proceedings of our former committees, and thereafter keep strict minutes of our proceedings. This was accordingly done, and we present the same herewith for your inspection. We recommend our successors to keep full record of their proceedings for future reference.

W. IRVING ADAMS,
A. BOGARDUS,
JNO. CARBUTT,
V. M. WILCOX,
W. J. BAKER,
EDWARD L. WILSON.

On motion the report was received, accepted, and ordered to be filed.

President Bogardus.—To make these meetings as practicable as possible I will now invite Mr. J. W. Black, of Boston, whom I see is in the room, to speak to us on the subject of his new acid silver bath.

Mr. Black ascended the platform amid great applause, and said: Gentlemen, I suppose our worthy President wishes me to describe to you the novel kind of bath which I have been using. You all know, perhaps, how little of the silver used goes to make the picture. Thirty or forty grains to the ounce are employed, and yet but a little is actually consumed in making the photograph.

I have often used a bath when it got down to ten or fifteen grains, and produced some of the best pictures I ever made.

The bath a little old works better. By working the plate rapidly in the bath we succeed in making better pictures than if the bath were new.

I make a solution of nitrate of silver, fifteen grains to the ounce. To the pound of crystals I add four to six ounces of nitric acid C. P. I make my collodion always of good body. Excite with iodide of ammonium. No soluble chloride, but a very little ether. My man has changed from chloride to bromide, and has worked it for weeks without my detecting it. I make the collodion of strong body, and excite as much as it will bear. I can hardly give you an exact formula.

In using a bath of fifteen grains you have got to be a little more careful of your proportions. If you have a bath of about

forty grains, two or more grains of salt either way don't make it observable, but come down to closer proportions, and you have got to be more careful. Develop as usual; rather stronger development works quicker; this works a soft, even, close deposit; and in every respect you could hardly tell the difference between a plate sensitized with this weak bath and a stronger one; the color is nearly the same, a little more translucent, otherwise almost identical. I have brought on a few pictures just made in that bath, and these will give you a little idea of how it works. Some of my Boston friends have been in my dark-closet and seen it work.

I put four ounces to the pound in the bath; if I find my picture is coming out hard, I keep adding nitric acid until it works soft and quick; and it has that result always.

(Mr. Black exhibited some samples made by this process.)

And I work as high as ten ounces of nitric acid to the pound. With so much acid it does not do to allow the plate to remain long in the bath; it coats quick. With about four to six ounces, I work it as I would any ordinary bath; it is more economical, I think. I work my pictures quicker than I can with a neutral bath, or one slightly acid. By adding acid you can get every gradation, from hard and strong to flat.

A voice.—Can you use an old strong bath?

Mr. Black.—There is only one objection to that. You have got in it the saturated iodide of silver, which you know is bad. You can work it just as well though by working rapidly; any long exposure will make it look sandy. I have taken half of an old bath and added new bath, so as to bring it up to fifteen grains to the ounce. After the bath has worked a little while, it works better with me. I work this as low as eight grains to the ounce successfully. To my surprise I have worked this fifteen-grain bath about as long as I used to work the thirty or forty-grain bath.

Question.—What effect has a long exposure on the plate?

Mr. Black.—It works flat. A plate wants to be coated, neither too long nor too short a time.

Question.—Must the plate be used very soon after coating?

Mr. Black.—Not very soon.

Question.—If the plate were exposed fifteen or twenty minutes after coating, would it work flat?

Mr. Black.—Rather so; that is, it would not work with the vigor it would if it were exposed sooner. I think that is so with all baths.

Question.—I am speaking now of long exposures with a small aperture.

Mr. Black.—I have used it with the ordinary success; in some cases, exposed as long as half an hour.

Mr. Youngman.—How do you ascertain the strength of your bath?

Mr. Black.—The bath in the first place is made by weighing the silver. We usually take a pound of silver, and make up a quantity at fifteen grains to the ounce, testing with the hydrometer. If I add new bath I make the solution so it will aggregate fifteen grains to the ounce. I take half my old bath and strengthen it up and use for printing such portion as I reject of the old bath. I do that simply as a means of economy.

Question.—Use it with an acid?

Mr. Black.—I use it with ammonia. Add just ammonia enough to make the silver slightly neutral.

Question.—I would like to ask how long you have worked this bath?

Mr. Black.—For some five or six months. I have been making pictures with that formula ever since the test was taken in Boston, with now and then trying bromide as an experiment, and my man has time and again used collodion—once with bromide and once with chloride—without my detecting it. If I use bromide, in exciting, for this acid bath, I use no more than sixteen grains of silver to the ounce, but I use all the iodide. I can make the collodion carry and work smooth, and not get over-excited.

Question.—How thick a collodion do you use?

Mr. Black.—As thick as I can flow well. Sometimes in making a transparency, where I want to get great delicacy, I throw down a good deal.

Mr. Gardner.—Is there any tendency of the collodion to tear away from the glass?

Mr. Black.—I prepare my glass, in the first place, by washing it with alkali and acid; and after washing thoroughly, albuminize. Without that I could not keep my collodion on at all, but with that I have no difficulty whatever.

Question.—In making up your collodion don't you have a definite weight of cotton?

Mr. Black.—I have known cotton to vary with the same maker. With a certain quality of cotton we make a thicker solution than with a different one. I am not thoroughly versed in that. We have a formula, but very often we have to make the collodion thicker to make it work as we want it, but a certain amount of cotton does not always give a certain film. I use about an ounce of cotton to begin with. I have not made much collodion for a year, because I have a man who is very skilful at it. All these formulas require a good deal of judgment. You could scarcely follow any one of them exactly.

Question.—Why do you dispense almost entirely with bromide?

Mr. Black.—I find, by using much bromide in the bath, your picture is very flat, indeed.

President Bogardus.—Gentlemen, if you have any more questions ask them; Mr. Black is before you, and the process is not patented. [Laughter and applause.]

Question.—How soon after making it can you use your collodion?

Mr. Black.—I use it an hour afterwards.

Question.—What iodide do you use?

Mr. Black.—Ammonium. I don't find much difference between cadmium, potassium, and ammonium.

Question.—Do you know anything near how much iodide you use?

Mr. Black.—Between three and five grains to the ounce.

Question.—Does the bath require the usual sunning, also the kind of water?

Mr. Black.—I take our usual rain or Cochituate river water that comes into the city, and make the bath up with that, without any preparation or filtering. There is not organic matter enough in it to do much harm.

Question (interrupting).—In winter do you notice any difference between negatives taken with bromide and chloride?

Mr. Black.—I think I have. The chloride is bluer, darker, and looks more intense than the other. I use one grain of chloride of potassium, taken from Prof. Towler's suggestions, in place of bromide. I can't see any difference in the chemical effect except in deep shades; it will not give minute detail. The bromine gives a little more of a rich brown.

We have a neutral bath box in general use, very simple and cheap and good. We make a common box of white wood; screw or nail it together firmly, and cover it with the common tar with which they cover roofs. I have used a box like that for a year and a half without its leaking any. Such a contrivance, holding three pails full, cost me ten dollars, while a glass one would cost me sixty or seventy dollars. Silver put in that will work right along. The first solution I put in was colored somewhat; but after a short time it worked just as well, and I saw no difference.

President Bogardus.—I cannot let Mr. Black sit down without thanking him on behalf of the Association. Just that one fact of Mr. Black's standing up here and giving us that process has made me sure our organization is a success. [Applause.]

Two years ago a man who would have found out such a process as that would have written it out on paper, and travelled from Portland to New Orleans selling it out at twenty-five dollars apiece. To-day it is told to you openly without any secrecy whatever. It confirms my impressions that we are stronger united than divided.

The next thing in order is the report of the Committee on the Relief Fund.

Mr. Henry T. Anthony, of New York, read the report of the Committee on the Relief Fund as follows:

REPORT OF THE BOARD OF TRUSTEES OF THE RELIEF FUND.

In consequence of the difficulty of getting together the Trustees from their widely distant places of residence, no meeting was held until the evening of June 6th, at Philadelphia. The following is the minutes of the proceedings:

The first regular meeting of the Board of

Trustees of the Relief Fund, was held at the Continental Hotel, Tuesday evening, June 6th, 1871; present, Messrs. Henry T. Anthony, W. L. Adams, A. Bogardus, Edward L. Wilson, Albert Moore.

Mr. Anthony presiding.

Mr. Moore was elected Secretary pro tem.

The first business in order, the drawing for terms of office, resulted as follows: Mr. D. K. Cady and J. C. Potter, 1 year; W. Irving Adams and H. T. Anthony, 2 years; B. French and A. Moore, 3 years.

On motion of Mr. Adams, it was

Resolved, That in consequence of the difficulty of convening a quorum of the Board of Trustees as the Board is at present constituted, we recommend to the Association a change, reducing the number of Trustees to three, all residing in one central locality. The President, Secretary, and Treasurer, still to act as members of that Board, in accordance with the original constitution of that Board.

The meeting then adjourned.

In consequence of the probable change in the constitution of the Board, it was deemed inexpedient to do anything further in organizing it by the election of permanent officers, &c.

In the absence of organization, the Trustees have not been in a position to take charge of the funds that thus far have become due to them.

In case no change in the constitution of the Board be made, it will be necessary to provide for the election of two new Trustees in place of Messrs. Cady and Potter, whose term has expired. All of which is respectfully submitted.

H. T. ANTHONY,
A. MOORE,
W. IRVING ADAMS,
D. K. CADY,
ABRAM BOGARDUS,
EDWARD L. WILSON.

The report was adopted.

E. Y. Bell, Esq., of New York, the counsel of the Association, was called upon, and proceeded to give an account of his department, as follows:

MR. PRESIDENT AND GENTLEMEN: I did not expect to say anything to you this morning; I thought I would meet with you this afternoon and say a few words; still as this is a business meeting, I will present a business matter. You elected me a year ago as your counsel. I have come here to give an account of my stewardship. I have no decrees or judgments to bring here in your favor, but I can come and report progress

in regard to the affairs and condition of the Association.

If you remember, last year the decree we had was a decree in the case of the Shaw & Wilcox Company against one of your fraternity. That was a decree invalidating a patent, where this company laid an especial claim to an apparatus for the purpose of saving waste solutions in your baths. That was what the patent was really for, and we beat him on that patent. But on or about June, 1870, he went down and surrendered the old patent, and took out what they called a reissue, laying especial claim to the process, or means, and no special claim on the apparatus. In the month of July, 1870, they commenced six or seven suits, both in the eastern and southern districts of New York. The first suit was against your President. Then against Messrs. Anthony & Company, then against Mr. Merz, and others, prominent photographers in the city of New York and Brooklyn. These suits are pending by virtue of what they call the reissue of the Shaw patent, and not in the name of the company, because, as I understand it, they failed after we beat them in May, 1870. In other words, they could not stand it any longer.

Now, gentlemen, since last fall we have been diligently taking depositions in one or two of those cases.

The Messrs. Anthony called in the distinguished counsel, Keller & Black, of New York, who are their especial counsel in the matter, and I have taken counsel of them, and they look forward to success. I have the Bogardus case on the calendar of the United States Court, as No. 35, and I was in hopes to have argued it last month, so as to bring you a definite result to-day; but owing to the large number of cases on the calendar set for hearing before it, it has not been reached, and I am afraid I can't argue the case before September or October of the present year.

I do not want to guarantee success, but I do think, gentlemen, looking from my standpoint, I am going to succeed; and if we live to see 1872, you will hear the final result, and that result I think will be in favor of us, and I hope in sincerity that will be the end of this troublesome patent. We could not prevent this reissue. Mr. Shaw was entitled to it; the Patent Office Commissioner gave it to him, and of course he must take the chances in the courts and before the judicial tribunals of the country. We are trying to do all we can to test it well. I have gathered evidence, not only from all parts of this country, but from London and from Germany; and when the case is finally presented, it will be

presented to the best of our ability. No stone has been left unturned, every effort that could be put forth legitimately has been put forth, and I am glad to say that Mr. Bogardus and those gentlemen with him in the litigation, have done nobly, and I am indebted to Mr. Merz for his very able and clear testimony in the Bogardus case. I have been interested in giving such counsel as has come within my province relative to the individual interests of the members of the Association during the last year. If you see fit to keep me among you, I trust my relations with you in the future will be as pleasant as those in the past. [Applause.]

Mr. Daniel Bendann, of Baltimore, moved that the annual election be made the special order for 3 P.M. on Thursday, and that the President should appoint a committee of five to nominate.

An amendment was offered to have the Association appoint. Not agreed to. The resolution was agreed to. The committee was announced as follows: Messrs. Ryder, of Cleveland; Anderson, of New York; Carbutt, of Philadelphia; Baker, of Buffalo; and Hall, of Chicago.

Mr. Bendann also moved that the Executive Committee be directed to prepare business for the Association, and that they be in session daily from 9 to 10 A.M. Agreed to.

Mr. Bendann moved that all resolutions appropriating money be referred to the Executive Committee, to be reported upon the next day.

It was announced that Mr. F. Gutekunst proposed to take a photograph of the members of the Convention.

Mr. Vansyckel moved to accept the proposition, and that a committee be appointed to arrange the details. Agreed to.

The committee was announced: Messrs. Vansyckel and Fennemore, of Philadelphia, and Scholten, of St. Louis.

Mr. W. Irving Adams, of New York, moved that the sessions be held daily, at 10 A.M. and 3 P.M. for business. Agreed to.

Mr. W. J. Baker, of Buffalo, proposed amendments to the by-laws, which were laid over until to-morrow under the rule.

Mr. Decker, of Cleveland, also proposed an amendment, which took the same course.

On motion, adjourned to meet at 2½ P.M., to attend the reception at the Academy of Music.

AFTERNOON.

THIRD ANNIVERSARY RECEPTION,

At the Academy of Music.

At a quarter past two P.M., the Academy of Music was well filled by a fashionable Philadelphia audience, with the exception of the five hundred seats reserved in the parquet. Just before half-past two P.M. the members of the National Photographic Association (ladies and gentlemen) marched in together and completely filled the seats reserved for them, the orchestra meanwhile performing sweet music. Promptly the Permanent Secretary stepped forward and addressed the audience as follows:

LADIES AND GENTLEMEN: In the name of the National Photographic Association of the United States we thank you for your kind presence with us this afternoon at our third anniversary.

It is our daily work to "make faces" for you, and to "take off your heads," and we are glad to see you in a different light on this occasion.

The great object of this Association is the advancement of the beautiful art of photography.

We endeavor to bring this about in two ways:

1st. By interesting you in our work as we progress; and—

2d. In improving and educating our fraternity.

We therefore hold an annual exhibition in some one of our great cities, where the public may see and judge of what we have done, and where photographers themselves may study the work of each other.

Such an exhibition is now opened at Horticultural Hall, in this city, and we believe that in Philadelphia, where the friends and lovers of art abound, that it will be visited by thousands.

I need not detain you with a detailed statement of the wondrous doings of photography. You all know it has been made to reach to the heavens, bringing down the mountains of the moon, and topographical views of Pleiades; that it has reached down into the bowels of the earth, and brought up revelations that are fearful and wonderful; that it is an important and invaluable aid to science in all departments, to art, to mechanics, and to all branches of industry, for do we not find it offering its good services hand in hand with all that is beautiful and useful?

Neither need I remind you of the blessedness of photography in the household, where it touches the tenderest chords and awakens the

heartiest sympathies, binding us closely to our loved ones.

There is no department of the arts or the sciences that has made such rapid strides as has photography, and we ask for it more attention from you, and a higher consideration for it and its professors.

Wonderful as are all its reaches it is yet an infant. Some of its earliest disciples are yet living, and in our own city, where the new-born art was early taken up and practiced, we have still living those fathers in photography: Langenheim Bros., Schreiber, Root, Simons, Broadbent,* and others—all of whom are with us in good health, and still actively engaged in the prosecution of their beloved vocation.

We ask you to watch us as we move onward and upward, and to give us your kind support.

Fellow-photographers, welcome to our city of Brotherly Love. Within its bounds the independence of our nation was first declared. Its inhabitants were the first to listen to the sounds of liberty as it was first proclaimed to all the land. The first American disciples of Daguerre were Philadelphians, and are still living. We welcome you here, and trust that your sojourn may be pleasant among us. Give good heed to all you see and hear while in attendance upon our Annual Convention and Exhibition, and I am sure you will then feel it was good to be here. There is much for us all to do. Let us work valiantly, and we shall conquer in the end. Again I welcome you as your Permanent Secretary, and as a citizen, to the city of Philadelphia.

President Bogardus, in response, said :

In the name of the Photographic Association of the United States I thank you for this cordial welcome. In the name of all that optics and chemistry have done to reveal the wonders that surround us in the world, I thank you. In the name of all that science and art has done to render life more fruitful, I thank you.

We are engaged in an art but little known, and it does me good—and I dare say every member of the Association good—to see that the intelligent men and women of almost every community are interesting themselves more and more in the wonders of our beautiful art.

The time has been when it has stood at a low ebb, when persons of apparent intelligence

seemed to think the only value to be attached to photography was the number of poor miserable little pictures they could get for an indifferent sum; and the meaner man around the corner who would give them the greatest number of such pictures for a given amount would get their patronage. [Applause.] But I am happy to say the tastes of the people have been cultivated until now such a man is not patronized, and I am glad of it. The people of Philadelphia, as well as other cities, are appreciating to-day the wonders of this art, for I claim for it a high standing as one of the finest arts. Is there an eclipse of the sun—the photographic lens will enable a scientific man to trace it second by second, and then give you a perfect picture of it. Do you wish to see the wonders that surround you?—the microscope will magnify the most infinitesimal object, and photography will picture it, and you can examine it at your leisure. Do you wish to travel around the world and not leave your own household?—photography will give you hill, valley, mountain, plain, and river, city and hamlet, and the inhabitants, too, of every nation, placing all before you for your examination. I claim, then, more for photography than mere dollars and cents.

I have a great reverence for anything that is old, yet not stale, and although Philadelphia is an old city, it seems to be new with life and full of Young America to-day.

We see here to-day those gentlemen whom we claim are the aged ones amongst us in our profession. They feel to-day just the same anxiety we do for the elevation of our beautiful art. We appreciate them because they are old, and have been with us so long. Perhaps you will get my idea better when I say, I go out into the forest and see and admire the young sapling, but when I see the majestic oak that has stood for centuries the wind and storms, I must bow before that with reverence; and I do to-day before these men. We photographers feel ourselves indebted to the citizens of Philadelphia. We shall highly appreciate this kind reception, and only ask, as we leave this place, that we may have a reception as cordial and welcome in other cities where we may go as we have met in this, the city of Brotherly Love. [Applause and music.]

Mr. E. L. Wilson.—Fellow-photographers and citizens of Philadelphia: It was our intention to have Mayor Fox of this city address you this afternoon, but he is unavoidably absent from the city. E. Y. Bell, Esq., counsel of the Association, will address you in his stead.

* These "fathers in photography" were seated on the stage, and arose as their names were mentioned by the speaker, amid great applause.

Mr. Bell then made the following address, being continually applauded:

MR. PRESIDENT AND GENTLEMEN OF THE CONVENTION.

It is with feelings of the profoundest pleasure that I appear before you to-day, on this your third anniversary occasion. I am happy to see in your midst so many familiar faces—and although a year has circled by since we met and parted at the beautiful city of Cleveland, yet the memory of our memorable visit there is as fresh and vivid in the mind as though it was but yesterday. The swift rolling current of time has swept us one year further out upon the uncertain sea of life, and carried us one year nearer to the vast and eternal port, toward which we are voyaging. This well-filled hall, your large and increasing membership, the faithfulness of your officers, and of those interested with the management and direction of your affairs, together with your unrivalled display of the richest products of your splendid art, these and many additional circumstances and facts, are the strongest evidence and best guaranty of the usefulness, extent, and sincerity, of your past labors, as well as a marked indication of the growth and development of your young but energetic Association. This is the occasion for mature and considerate deliberation. You are expected to unfold to each other your own proper reflections and experiences relating to the theory and practice of the photographic art. In doing so, you are sowing seed that somewhere finds a lodgement in a mind and heart truly and glad to know it, and although you do not see the present or immediate result flowing from your action of to-day, yet you may fondly hope to see the seed of wise counsel and kind instruction to the young and ambitious photographer, taking deep root in a willing heart, and ere long rejoice with him whom you have benefited, in gathering in the rich and golden sheaves of success. For long ages the beauty and utility of your art slumbered. The ancient cities of the past boasted of their sculpture, painting, and scientific achievements; and yet, amid them all, they failed to discover the art of taking a picture by the process of light and chemical action. The same light that falls over the face of nature to-day, lighted the earth two thousand years ago. The same compounds or elements composing the chemical science to-day existed then, but were unknown and undeveloped in their nature.

The present condition of the world, respecting its culture, intelligence, refined and beautiful tastes, owes much to the creation and fostering

of the photographic art. Athens and Rome at one time were seats of all that was deeply learned and grand, beautiful and artistic, and yet their genius and taste had not found what to-day we enjoy. The process of taking a picture of a human face, or an object in nature, upon paper, glass, or metal, and so multiplying and stereotyping the minutest feature and most delicate outline, until gazing, as we have often done, upon the picture, we fancy we see the face itself, or stand beneath the shade of the "old oak tree" that was so happily chosen the object of the photographer.

There is a refinement in our art which ever associates it with all that is true, pure, and beautiful. Our homes are the fitting repositories of your choicest products. Your genius and your taste are conveyed by the power of light, through the action of chemical ingredients, to the glass, and again by process to paper and print, until we find within our circle at the fireside the face and forms of those you have photographed. Some have only passed over the dark river to the eternal light beyond, while others are absent and far away in life, and to whom we are united by a thousand tender ties of friendship and love. You are not working for the present only; remember that you are laboring for the future and for posterity.

The work you now do will not die with you. The hand that embellished "that perfect figure," the mind and heart that conceived of those artistic effects, shall forget to do their cunning, but the result, rich and beautiful in design and in workmanship, will survive to enliven and gratify the tastes of others yet unborn. Then, if you are working for posterity, do your work well; take pains to do your best; use the talent that God has given you, in a manner that will elevate your own souls, that will raise you, and your art, higher and higher in the scale of human attainments. It was with pleasure that I received, a few weeks ago, from a member of this Association, practicing his profession in one of Ohio's beautiful towns, a small collection of photographs, with the personal assurance that he not only thought, *but knew*, that he took a better photograph to-day than he did a year ago.

In his letter to me he breathed, as it were, the true sentiments of an ambitious and devoted heart to your attractive art. He said that when he left Cleveland a year ago, he was determined to do better work, and although at first it cost him a sacrifice, yet he had triumphed, and was now able to send to the present Exhibition samples of his artistic skill, which I am happy to know please the eye of any who have seen his

beautiful collection. I only speak of this personal incident as a sure and unmistakable sign of the true value and great work which your Association is doing for all who desire the development of the art. The example of to-day, if it be a good one, is a powerful influence in the same direction to-morrow. And if your pictures are the best and most attractive that your skill and handiwork could make them, rest contented that you have done your duty, and already some forlorn and shipwrecked brother has taken hope, and with renewed heart and cheerful spirit, again strives to emulate your faith and courage.

France, once a noble and beautiful country, birthplace, home and burial spot of the immortal Daguerre and his co-worker, Niépce—we mourn her present misfortunes. We, ere this, hoped to see her restored to a lasting peace, but the rude shock of war and the cruel devastations of intestine strife, rendered her sunny homes desolate, and in her great city, Paris, where stood the shrines dedicated to ancient art and science, where lay the rich treasures of master minds, and of those whose names have cast an immortal lustre upon the pages of modern history, and whose deeds adorn the monuments in civilized lands that rise to mark the creation and progress of science. Her national glory has departed; her political strength has become weakness. And yet, through all her strange and bloody vicissitudes, streams the light which the minds of the distinguished Daguerre and Niépce shed, when living, upon the art of photography. France may be overthrown, but the influence and deeds of her illustrious sons in the cause of science and education shall last forever. And just here, I desire particularly to call your attention to the proper cultivation of your soul and mind within, so that your very work will reflect its God-given qualities. Coupled with this, exercise a strong living faith, and self reliance in your professional labors, and depend upon it, the future will crown you with success.

Could you have looked upon that busy throng of workmen, who, with pick and shovel dug the trenches for St. Peter's at Rome, you might have wondered why their confusion and apparent disorder; yet the architect whose genius conceived the plans, believed the stately edifice rising, as it were, from chaos, assuming the shape ere a stone was laid of that splendid fabric, which was to be the pride and ornament of centuries yet unborn. So the photographer sees amid all his varied work and intricate processes, through which his picture passes before finished, the perfect image of his subject. What seemed to the subject weariness, dullness, and confusion, was

to his skilled eye and trained mind, the dawn and development of a perfect photograph.

The artist, as he stretches his canvas on the easel, and applies the first stroke of the brush, feels his enraptured soul fired with a divine inspiration as the rude material glows with the reflective beauty of the yet to be developed picture. The sculptor, as he plies the chisel to the unseemly block, hears sweet music in the chippings, for each stroke of the mallet is to his ear the freeing of an imprisoned angel, that from creation's dawn has been locked in the cold embrace of marble. And thus, the photographer, in the faces and forms before him, and in the objects of nature about him, and even before the lens of his camera is set to receive the earliest impressions of his subject, sees in imagination the well-defined photograph; the beautiful and artistic effects which add to the charm and value of the work about to be developed.

The aspiring photographer after knowledge in his art, feels in each truth that flashes on his mind, the constant and increasing growth of the soul within. Herein lies the mainspring to all successful action in your great department of labor. The photographer must be a man of large soul and self-reliance; to him faith is the unseen bridge which he must cross to gain distinction beyond the mystic ladder, up which he must climb before he can reach life's highest destiny. If he stands idly at the base, he may catch the gleam of "fine photographic effects" and immortal fame, but he can never possess the art of accomplishing them. The bright dreams of youth, the airy castles of manhood, will fade away, and be lost amid the lowering clouds of bitter disappointments in seeking after perfection in your art, but with faith and courage to sustain you, the dreams of to-day will be woven into the golden realities of to-morrow, while the airy castles which have floated before ambitious vision shall be but reflections of that enduring temple where fame sits enthroned amid eternal powers.

Without the exercise of this faith and courage, the distinguished chemist, Scheele, would have given up his experiments, and surrendered his hopes to ascertain the true action of light upon silver bodies.

Ritter, Wollaston, Wedgwood, and Davy, all possessed these grand elements of character to a marked degree, or the latter part of the eighteenth century would not have witnessed their splendid triumphs in the chemical science, as applied to the development of photography.

The names of the immortal Niépce and his faithful co-worker, Daguerre, are illustrious examples of men who possessed, to a large measure,

faith. How often the clouds settled about these two sturdy pioneers in the photographic art. Experiment after experiment was made by them, until in January, 1839, they report on their united success, and gave to the world for the first time a definite invention which is one of the wonders of the nineteenth century.

As one of your distinguished writers of the day has said upon this very point: "Coexistent with the steam engine and the electric telegraph, and equally important as these in its influence on the ways and means of life, is the art of sun-drawing. It is one of the great wonders of the phenomena of created matter." Now these words are true regarding its present development, but what say you about the future? I hardly dare to venture my views upon a matter, which after all, is but speculation; and yet, taking the past and the present as the standard and guide by which to explore and measure the future of photography, I venture to say, that your Association which numbers to-day but hundreds, will have upon its glorious roll-call thousands of active and faithful members.

Your Exhibitions and Conventions now looked to and attended particularly by those immediately interested in your art, will in future years be hailed with anticipated delight by all classes of society. To-day you are the silent educators of your countrymen. The beautiful associations that cluster about your work; the soul of the artist, reflected forth in his picture; the inspiration of the mind, executing its finest effects in connection with light and chemical action, all tend to mould men anew, in idea and in feeling; and that which is charming, enter the place of the revolting in character; that which is pure, succeed the impure, and that which is true and beautiful is substituted for the false and ungainly. until the people of this land, in fact the world over, shall all appreciate the higher and nobler object of life.

Go on, then, in your work, make the aim of your Association a high one. Remember that, as each individual has the moulding of his own character, so every organization, yea! every nation, has the formation of its own future. The laws which apply to the one, act with equal force on the other; for, after all, your Association is but individuals in a collective capacity, so that whatever characterizes a society, or nation, is seen to find reflection in the laws and objects which govern them.

Your objects of relief, of mutual exchange of each other's views, respecting the same art and work; your protecting the weak from being trodden down by imposing foes; your sublime

determination to elevate the art, in a natural sense to make it common, yet dignified—good, better, best—yet within the means and embrace of every one; to adorn it; to ever elevate instead of diminishing its increasing strength and conceded beauty. Beware of disunion among you. Let your councils be at all times harmonious. Let no frets, no fears, no jealousies, no enmities, ever enter in and disturb your relations to each other, and to your mother organization. On the other hand, be firm in doing right; faithful in the discharge of your every duty.

And the city of Philadelphia, which has so gladly welcomed you and given you her warmest sympathies and most open and cordial support, will in the future look back to the year 1871, and count it joy that you held your Exhibition and Convention within her historic precincts. All honor to those who formed the Association. All honor to those, who, through its infancy, gave it a liberal and manifest support. The past is secure, the present is a grand success, and the future is radiant with hope and promise.

Mr. Bell closed amid loud applause, and was followed by the stirring music of the orchestra.

At the conclusion of Mr. Bell's address Mr. J. W. Black, of Boston, gave a stereopticon exhibition. The negatives used were furnished by Mr. J. Carbutt, and the positives were furnished by Mr. William Bell, of Philadelphia. At the conclusion a plain surface was thrown upon the screens, and after remaining for some time, the announcement was made that, time having been given for the imagination of the audience to exert its powers, the exhibition would close, and all were invited to attend on Friday evening, when the grand stereopticon display of the exhibition would take place under the charge of the same exhibitor.

Amid considerable merriment, and the music of the orchestra, the audience dispersed, and the Exhibition Hall was soon thronged.

THURSDAY, JUNE 8TH, 1871.

Second Day's Proceedings.—Morning Session.

The Convention met at 10 o'clock A.M. The minutes of the previous session were read and approved.

The roll of the delegates was called by the Permanent Secretary.

A letter was read from Mr. Edward Anthony, of New York, expressing his regrets for circumstances which compelled him to be absent from the sessions of the Convention. He begged leave to remind the Association that on the 10th instant there would be a grand demonstration in New York to do honor to Professor Morse (the first photographer in the United States), by erecting to him a statue in Central Park. Mr. Anthony suggested three cheers and the honors of the Convention for the veteran.

The communication was accepted, and action thereon laid over until Saturday.

President Bogardus stated that he had made an effort to obtain from Professor Morse the first camera that had been used by him in taking the first daguerrotype ever developed on the American continent. He had discovered, however, that the instrument was in a greatly damaged condition, and had been stored away.

Mr. H. T. Anthony, of New York, addressing the Convention upon this subject, said he recollected very distinctly the time when Professor Morse had the establishment at the corner of William and Beekman Streets, New York—when, though the light was coming into the room from all the points of the compass, it was found necessary to have the subject sit for a half hour before anything like a respectable picture could be secured.

A delegate suggested that an effort be made to secure the camera referred to, to be placed in the collection of the National Association.

President Bogardus said he would see Professor Morse on his return to New York, and if he would consent to sit for a picture he would take it with the "old camera," and present a copy to every member of the Convention. [Loud applause.]

The President introduced to the members of the Association Messrs. J. D. Masters, J. R. Woodburn, and J. P. Tuck, of New Brunswick, who had been accredited from across the border as representatives to the Convention. They were greeted with applause, and assigned seats to the right of the Chair.

Mr. Loomis of Boston moved that the

Homœopathic physicians assembled in this city in convention, be invited in a body to visit the Photographic Exhibition, and that the Chair appoint a committee of three to carry out that result.

Agreed to, and the Chair accordingly appointed Messrs. Fetter, Loomis, and Elliott.

It was agreed that Mr. Anthony's communication be accepted, and that the three cheers suggested by him for Professor Morse be given on Saturday morning, at the time of the unveiling of the Morse statue in New York, and that a telegraphic dispatch be at the same time sent to Professor Morse announcing to him the action of this body.

On motion of Mr. Loomis, the name of Mr. Fennemore was added to the committee appointed to invite the Homœopathic physicians to visit the Photographic Exhibition.

President Bogardus.—The next business in order is the report of the Committee on the Progress of Photography.

The Secretary read the report as follows:

REPORT OF THE COMMITTEE ON THE PROGRESS OF PHOTOGRAPHY.

To the President and Members of the National Photographic Association of the United States of America.

AMERICA.

GENTLEMEN: The Committee on the Progress of Photography, appointed at the last meeting of the Association, would respectfully report:

Although your Committee have not the pleasure of including in their report any discoveries of great importance to the advancement of the art of photography during the last year, yet steady progress has taken place in many of its departments. In portrait photography, a more careful study of the principles of art is manifest in the arrangement and lighting of the picture. Improvement in the Rembrandt and composition style of portraits is very marked, the pictorial effect of those pictures being greatly due to careful attention to light and background. As an advance in that direction, we call attention to several new backgrounds that have recently been introduced; also, to a new material designed to take the place of expensive silk curtains, or, indeed, any form of photographic drapery.

The magic lantern is becoming more popular each year, and with its advance comes an increased demand for first-class positives of interesting subjects for exhibition. Many are ex-

perimenting, both with the wet and dry process, to ascertain which produces the best and most reliable results; and we look forward to the coming exhibition of lantern slides, before the National Photographic Association, to demonstrate which is the superior process, and at the same time, prove that this department is not behindhand. The magic lantern is now used most extensively to illustrate public lectures upon all subjects, and contributes largely to instruct and amuse the home circle. Photographers do not appear to realize how easily glass positives can be produced, and what a revenue may be derived from the sale of really fine subjects.

Great as was the improvements in solar work exhibited at the meeting of the Association at Cleveland, we feel satisfied that this most valuable branch of photography will be well represented in Philadelphia. Photographers have learned that to produce a fine enlargement, the negative must be first-class, or the picture will be unsatisfactory. Much has been written on this subject, and as a result the average number of negatives now offered for solar enlargement are better suited for the purpose than was the case last year, fewer negatives are spoiled by the use of sulphuret of potassium, and more skill and attention is shown in their development.

This year we shall not have the honor of Dr. Vogel's bodily presence among us, but attached to this report will be found a very full and interesting communication from him upon the Progress of Photography in Germany, which shows that he is truly with us in spirit. A very valuable paper by G. Wharton Simpson, Esq., editor of the *Photographic News*, is also appended to this report, giving an account of the Progress of Photography in England.

The Woodbury and Albert processes in this country report progress, but various difficulties have occurred to delay their practical usefulness. Owing to the fracture of the press used in the Woodbury process (constructed in France) much time has been lost in its development in America, but a powerful new press (made by Messrs. Hoe & Co.) has just been finished, which ere long will speak for itself. Before another year passes it may be reasonably hoped that both of the above mentioned processes will have fine results to show, and offer an opportunity for comparison.

From photo-lithography applied to the reproduction of drawings, engravings, &c., we find much of practical use and improvement.

The subject of apprenticeship, or a school for a thorough course of photographic instruction, is manifestly of great importance, and we trust it

will receive the consideration that it justly merits.

The good effects of a moderate retouching of the negative by skilful hands, is in many cases very apparent, but the tendency is to overdo the matter and produce pictures of wonderful finish, from which much of the original likeness has departed. Aim to accomplish the effect desired by as little stippling as is possible over those portions of the negative that require it most.

It is gratifying for your Committee to report that the manufacturers of mounting cards in this country are paying more attention to supplying photographers with a purer article of paper, upon which to mount their prints, than was formerly sold for that purpose. The variety and quality of tinted and ornamental mounting boards has also increased and improved during the past year.

The Victoria card is growing rapidly in favor, both in Europe and America; its advantages over the carte de visite are being properly recognized.

There is one department of our art that we regret to say does not show the improvement that its importance justifies. Landscape photography in America does not occupy the position that it should, and we earnestly entreat photographers to pay more attention to this subject. In Europe, landscape photography is fully on a par with portrait work, and is very remunerative; both stereoscopic and large pictures are eagerly sought for at all places. There is undoubtedly a reason for this, inasmuch that in Europe there are more really fine subjects suitable for outdoor work than in America. We have fine scenery, embracing mountains, rivers, lakes, and waterfalls, but we lack the exquisite pictorial effect of the quaint old buildings, bridges, and fine specimens of landscape gardening, that are so constantly to be met with in Great Britain, Germany, France, and Italy. Much of the scenery of America is unique, for example the magnificent Yosemite Valley and Falls of Niagara; but without wishing to underrate our fair country, we are deficient in the *bits* that go so far in making a charming landscape picture. While this may account in some measure for the exquisite beauty of outdoor foreign photographs, and add largely to their demand, yet there is more to be considered than the question of old buildings, picturesque bridges, &c.

The simple truth of the matter is, that at present we cannot successfully compete in execution with the best foreign landscape photographers. The quicker then those interested in this subject apply themselves attentively to outdoor manipu-

lation and pictorial effect, the better will it be for the credit of photography in America.

Portrait photography is advancing rapidly, and although we have much to learn, yet each year witnesses a decided advance. Landscape photographers, be not behind your brother artists, but put your united shoulders to the wheel, and obtain a like success.

J. C. BROWNE,
Chairman.

ENGLAND.

GENTLEMEN: Having been placed on the Committee of Progress of your important Association, I cannot permit your Annual Convention to pass without sending you a few brief notes on at least one phase of progress associated with our art. It is with exceeding regret that I am compelled to deny myself the privilege of being with you at your Annual Meeting, in response to a most enticing and only too alluring invitation to join you. I console myself in my absence by anticipating that a time available for my visit will yet come.

I have been so long accustomed in the pages of your official Journal, the *Philadelphia Photographer*, month by month to chronicle each step of progress in the Old World, at the time of its occurrence, that I fear any general report would seem but a twice-told tale. I shall not attempt, therefore, to enter into any estimate of technical photographic progress in this country. There is not one of you, I apprehend, that is not familiar in greater or less degree with the majority of the improvements in photographic appliances and processes which have been proposed for years past, whether in your own country or in the Old World. In passing these things with a merely incidental allusion, I do not wish in any degree to ignore their importance. Photography of all the Fine Arts—and I assume its position as one of the Fine Arts as too well established to need vindication here—photography of all the Fine Arts is probably least plastic in its nature, is most bounded by material conditions, and hence it is of vital importance that the photographer should possess every material aid which can be rendered available in his art. But I assume your familiarity with these things in order to confine myself to one form of progress, which has of late had its full share of the attention of photographers, the value and legitimate results of which demand serious consideration. I refer to the now almost universal practice of supplementing the action of light by working upon the negative.

Perhaps few things in connection with photog-

raphy have fascinated the portraitist or the public more than the pictorial results of retouched negatives; and when the retouching is effected by artistic hands, and confined to judicious limits, no effect is more legitimately satisfactory. The rage for portraits from retouched negatives which has of late years spread over America as well as Continental Europe and England, commenced, I believe, originally in Paris; the method having been first practiced in the atelier of M. Lewitsky. In his hands the retouching of the negative was effected with such delicacy and judicious reticence that few suspected the source of the peculiar beauty of these portraits. The striking pictorial qualities this method yielded first stood confessed as the result of artistic manipulation on the negative in Germany, and prints from such negatives produced in the studios of Berlin and Vienna began to attract attention throughout the world. Bold effects of lighting in which the masses of shadow and half shadow were rendered transparent by exquisite detail and reflected lights; texture of singular delicacy and tenderness, with a degree of modelling and solidity hitherto unknown in connection with such delicacy, and an amount of mechanical perfection very unusual, were the familiar characteristics of the new school of photographic portraiture. If the results of the new treatment required any justification beyond their beauty, it was not difficult to supply it by reference to the inherent shortcomings of photography. And in referring to these matters I may here, and at once, express my conviction that retouching on negatives is not only justifiable, but, within certain limits, desirable for various reasons, of which I may mention three of a specific character.

I. Because of the inherent incapacity of photography to render in monochrome the accurate relations of color. The yellow tint of freckles which in nature is scarcely distinguishable from the white and rosy tints of health in a brilliant complexion, is rendered by photography as a series of black spots. Simple truth demands the aid of the artist to modify this and similar errors.

II. Because of the accidental errors of photography, specks, stains, and results of imperfect lighting, and similar sources of evil, which if uncorrected destroy delicacy, definition, and modelling.

III. Because of the accidental and temporary defects in the model in the shape of scars, pimples, blotches, and other passing imperfections, which being of a temporary character in the sitter should not be perpetuated in the photo-

graph. For these and other reasons, regard for natural and artistic truth demands some amelioration of defects which tend to render the photograph unveracious as well as unpleasing.

Confined within the limits here indicated retouching on the negative is, in capable and judicious hands, a legitimate and wholesome adjunct to the result of light and the lens. Carried beyond these bounds, or attempted by the ignorant and incapable, it becomes one of the most dangerous and degrading innovations to which photography could be subjected. The highest claim of photography is its unerring, its uncompromising TRUTH. Destroy this, and it is degraded into a mechanical tool, fit only to be the servant of servants. It is the truth of photography which gives universality to its value, and obtains for it equal recognition in science, art, and industry. It is truth which renders its record precious to the astronomer pursuing his investigations amid other worlds; it is its truth which gives value to its renderings of the glimpses which the microscope gives of an otherwise unseen world; it is its truth which renders it valuable to the pathologist in accurately recording the appearance of morbid physical conditions; it is its truth which makes it valuable to the artist in rendering exquisite detail with a degree of faithfulness unequalled by any other agency; it is its truth, and the trust which that truth has engendered, which gives its special charm to photographic portraiture. It is, in fact, in all things upon its literal truth, its unswerving faithfulness, that its highest recognition is based. The term photographer has become idiomatic in our language to express accuracy of resemblance. A good photograph often possesses a subtlety of resemblance scarcely suspected until accident points it out, and at times brings out characteristics of race or mental capacity scarcely noticed in the original model. It was no mere baseless fancy which one of your own most accomplished authors illustrated when he referred to the sudden revelation of family likeness, made by the truthful sun-picture, which had not been apparent in the original. Nathaniel Hawthorne only eloquently states the simple fact when he writes: "There is a wonderful insight in heaven's broad and simple sunshine. While we give it credit for only depicting the merest surface, it actually brings out the secret character with a truth which no painter would ever venture upon, even could he detect it." Another of the noblest writers America possesses, and one happily still among you, Dr. Oliver Wendell Holmes, has admirably expressed his estimate of the truth of photography in his exquisite interpretation of

the classic fable in which Marsyas is played by Apollo, for he regards the photograph not simply as the semblance of the sitter, but as an actual skin or film of light projected direct from his body to the sensitive plate. This vital truthfulness of photography, it cannot be doubted, then, is its most precious characteristic. And, this truth is in danger from the practice of retouching the negative incapably and beyond its legitimate limits. The human face is undoubtedly to him who can read it the index of the mind, the expression of the soul. Each thought, each aspiration, each struggle, each generous emotion, each passion, each tender impulse, has written its history in lines, more or less apparent or occult, upon the face, and in the perfect photograph that history is transcribed, and in the clumsy and arrogant retouching much of that history is blotted out.

My friend, Mr. O. G. Rejlander, an artist and photographer of rare ability and conscientiousness, recently remarked at a social reunion of photographers, that he regarded it as nothing less than a calamity, that in after years, when photographic portraits of the mighty dead came to be examined, it would be necessary to refer to the years 1869, 1870, and 1871 as the years of photographic falsehood, the years when the photograph was sophisticated to such a degree, not on the point where it could be easily detected, but on the negative where its detection was more difficult, that no reliance could be placed on its presentment. This, gentlemen, is not a pleasant anticipation. How Americans as well as Englishmen would prize a good photograph of Shakespeare, or of Milton, or of Oliver Cromwell; but we should desire it with every wrinkle and line, and scar, and wart, as Oliver insisted his portrait should be painted. Our interest would be seriously diminished if we knew that the negatives had been sophisticated until all true life had been worked out of them. And it is not only truth, but some of the best characteristics of beauty, which are at times sacrificed. The luscious tenderness of flesh in beautiful health, so delightful in a good photograph, is at times destroyed, to give place to the smoothness, polish, and stony deadness of marble. All life is gone; the suggestion of a breathing, feeling, living face, is sacrificed to produce a pretty smooth mask.

Gentlemen of the National Photographic Association, let us prize truth. I do not ask the photographer to forego such a valuable power as he possesses in the retouching of the negative; but let it be used by artists who understand and prize art truth too much to sacrifice photographic

truth. Let not those who know nothing of the drawing of the human face, and who have not skill in the use of the pencil, attempt to lay presumptuous hands on the negative with a view to modify its light and shade or texture, and so perchance utterly destroy its truth of drawing. Let us aim to secure the most perfect photographic results, so as to render the use of the pencil for modifying photographic defects as little necessary as possible. Then let the pencil be used reticently and cautiously by capable hands, keeping carefully within the limits which a reverent regard for truth will dictate, always remembering that the use of retouching is to be strictly remedial, modifying, and ameliorating accidental and temporary defects, and softening, but never obliterating markings to which photography even with its inherent shortcomings may have given an exaggerated rendering.

G. WHARTON SIMPSON.

London, England.

GERMANY.

The past year conferred upon me the honor of becoming a member of the Committee on the Progress of Photography of the National Photographic Association, and as such I consider it my duty to report the progress which photography has made in Germany during the last twelve months. Being the only German member of that committee, I shall confine my remarks to German investigations, leaving the reports concerning England and America to my honored colleagues.

A gigantic war, the equal of which Europe has not seen for the last fifty years, has, during the past year, disturbed our political, social, and industrial life. Men of art, science, and industry were called to arms by the thousand, in order to fight a war which had been conjured up against our wishes, without a fault of ours. The youth of Germany gathered around the nation's standard, and for a moment it seemed as if our artistic and industrial life had come to a standstill in the turmoil of war. Thank God, it turned out differently.

When the first battle had been fought, when the proud conviction entered our hearts that the Watch on the Rhine stood firm and true, and that no enemy would cross the German river, the arts of peace revived, and six weeks after the beginning of hostilities, an art exhibition was opened in Berlin, richer in masterpieces than we had seen it for many years before. The devotees of photography did not remain idle, although many of our most prominent artists had exchanged the camera for the needle-gun, and

were fighting and bleeding for the dear fatherland.

In the midst of war we can point out several contributions to the progress of photography. I will begin with mentioning the investigations of Dr. Schultz-Sellack. He established to a certainty that the chloride, bromide, iodide of silver and their mixtures are sensitive to the light of the spectral colors. He showed how important a part the variable sensitiveness to color plays in portraiture, as in our ateliers the shaded side of the model is illuminated by light reflected from the walls, while the light side is illuminated by the white and blue light of the sky; this produces, generally, an over-exposure of the lights before the shadows have had time to impress themselves on the film. He pointed out how to modify the too intense light, without detriment to the action of the shadows, by placing a thin film of iodide of silver between the lens and the object. This film absorbs the energetic violet light, and the result is a harmonious picture. The discovery is valuable for the taking of interiors, oil paintings, and landscapes.

Equally interesting are the investigations of Dr. Schultz on the physical changes which iodide of silver undergoes, and also the production of color on a film of iodide of silver; finally the simple and easy production of daguerreotypes by exposing an iodized plate of silver under a negative, and fixing it. This last discovery may be important for America, where daguerreotypes are sometimes asked for, and where no one is at hand who would make them in the ordinary way.

The plates which are exhibited by Dr. Schultz in the present Philadelphia Exhibition represent results of his experiments.

In Germany particular attention has been paid to the artistic development of photography. The best portrait or landscape picture fails to make an impression unless the laws of the beautiful, which are the cause of our pleasure in contemplating works of art, have been observed.

Pose and illumination, projection, the beauty of lines and of arrangement, subjects which I have tried to elucidate in my Handbook of Photography, are of as much importance to the photographer now as good lenses and pure chemicals.

Negative retouching remains an important auxiliary to artistic photography. It equalizes the shortcomings which cannot be avoided by the chemical processes, and has for its purpose the removal of wrinkles, freckles, and other accidental matter which by its presence would interfere with the calm impression of a portrait, leaving at the same time those parts intact which

are the characteristic ones of the individual. The latter point has frequently been neglected, and we are indebted to Mr. Hartmann, who in two excellent essays (published in the *Mittheilungen*, July and August, 1870, and just reprinted in the *Photographic World*) pointed out the parts, which a thinking artist may change by the negative retouching, and which should remain unaltered, and the manner of proceeding in working out the lines of the eyes, the mouth, nose, chin, and forehead.

In like manner has artistic photography been advanced by Petsch and Grasshoff. While the former was encamped in front of Metz, in the service of his country, there appeared from his pen an excellent article on the influence of individuality in portraiture, also republished in America.

In photographic optics we have to record a new lens, by Steinheil, which is distinguished by a wide angle, great intensity of light, and freedom from all distortion.

The photographic printing process has been much improved by the introduction of washed silvered paper. The problem to produce permanent sensitive paper for the trade has been solved. Mr. Romain Talbot, in Berlin, has produced such paper, which in depth, brilliancy, and beauty of the tones, surpasses the ordinary paper. I have printed pictures on such papers, put them away for a week or longer before toning them, and obtained always the same favorable result.

The pictures by Mr. Grasshoff and myself, which are at present exhibited in Philadelphia, were printed on such papers.

The former mode of fuming has been much simplified by substituting the dry carbonate of ammonia for the liquid ammonia.

The "Lichtdruck" processes of Albert and Obernetter have been further improved, and found more general application. The silver print will always hold its own where a limited number of copies or extreme delicacy of detail is desired, but for productions in masses, where some of the quality is sacrificed for the sake of quantity, the "Lichtdruck" process and the Woodbury process, which approaches nearest the silver print, are of great value.

Photo-lithography, which is rather sparingly cultivated, possesses great merits for certain contingencies; for the reproduction of war maps it has proved again its efficiency. It supplied many thousands of copies with surprising rapidity, and supplied our armies with one of the most essential auxiliaries for an advance into the enemy's country.

The photo-lithographic establishment of Bros. Burchard, here, furnished to the army, from the 9th of November, 1870, to the 24th of January, 1871, no less than 42,000 maps, each being 2½ feet square.

Passing to the application of photography during the last year, I have to mention the services it has rendered to surveying in war times; two photographs, taken very often while exposed to the fire of the enemy, proved sufficient for the construction of a map of the landscape.

As a means of observation in astronomy and microscopy, photography has again done its full share of duty.

The reproduction of oil paintings opens at present an extensive field of labor to the German photographer. The artistic manipulation of the negative, after the example of Milster, has overcome the antagonistic effect of color, and we have now faithful copies of the art treasures of all the galleries of Europe. The greatest masterpieces become thus accessible to all, and photography contributes as much to the education of the people in the realm of art as the printing press does for the distribution of knowledge.

I have attempted to sketch with a few lines the progress of our domestic art, but I cannot omit to acknowledge the impulse which our German photography has received from America. The study of the principles of illumination by Mr. Kurtz in New York; the introduction of the curved background; the imitation of approved American apparatus, as, for instance, the stereoscope of Holmes; the enlarging apparatus of Roettger; the stands and camera boxes of the Scovill Manufacturing Company; the albumenizing of plates;—all these things have rendered material advantages to our photographers, and I look forward with much hope to the future intimate intercourse between Europe and America.

We have reached a turning-point in the history of civilization. The political events have taken from France the name of being the centre of science and culture. Other centres will form, not one, but several, and every educated nation will claim it as an honor to work independently for the promotion of art, instead, as in the fashions, to follow blindly the example of one people.

So far as photography is concerned, this emancipation has taken place some time ago. It will extend to other branches of art and industry. Let us rejoice at this future self-government of the nations in the realm of art.

One thing, however, may become of primary importance for the future development of our art. It is the artistic education of the disciples of photography. The scope is large; it requires

mechanical dexterity, chemical and optical knowledge, practice and acquaintance with the laws of art.

But how shall the young photographer become artist, chemist, optician, and practical worker? Only by study, and such studies can only be made accessible to him by the establishment of academies of photography. Only when such exist will we have a large number of able operators, and not before. Such schools might become a powerful lever for the further development of our art.

Perhaps such an institution will sooner flourish under the favorable sky of America than in the Old World, which so far has granted to the young art only a limited space in the places of learning.

DR. H. VOGEL.

Berlin, Prussia.

J. C. BROWNE,
Chairman.
G. H. LOOMIS,
J. H. FITZGIBBON,
JOHN M. BLAKE,
PROF. J. TOWLER.

G. WHARTON SIMPSON,
DR. H. VOGEL,

Committee on the Progress of Photography.

The report was accepted and ordered to be printed.

Mr. J. F. Ryder, of Cleveland, gave notice of a proposed amendment to Section 1st of the Constitution, providing for a phonographic secretary in addition to the officers already provided.

Mr. Baker, of Buffalo, called up his amendment to the Constitution, presented at the first session, providing that the Treasurer of the Association shall be a member of the Executive Committee. Adopted.

The Permanent Secretary read communications from Messrs. H. L. Bingham, E. A. Kusel, and other absent members.

It was moved by Mr. J. Lee Knight, of Topeka, Kansas, and seconded, that the autograph of President Bogardus be appended to the picture of Prof. Morse, provided said picture could be obtained.

Mr. J. H. Kent, of Rochester, N. Y., now read an admirable paper, as follows:

PHOTOGRAPHIC FRIENDS AND

FELLOW LABORERS, GREETING:

I have, in compliance with the request of your worthy President, prepared this brief paper as the very small mite I am able to contribute to

the large quantity of matter furnished by wiser and more experienced heads.

During the five years that I have been engaged in photography I have learned a few things; perhaps a few that have been overlooked by some of you, and you may be interested in listening to these trifles.

Many of you are veterans in the picture business; your efforts dating back to the time when real shadow pictures were first produced in the shape of the old daguerreotype.

Doubtless some of you, too, built your own apparatus, camera and all, and have kept pace with all the improvements in picture-making up to the present time.

To such of you, what one can say who has so recently been initiated, must seem of small account.

It would, indeed, be presumptuous in me to attempt to instruct any of you in the matter of managing the chemistry or mechanical details of your business. In fact, it seems to me, that this part of photography is and always has been in advance of the *artistic*; and that photographers generally, when they have made a clean, sharp, and well-defined negative, have been satisfied to let the customer go, providing he made no objection to the picture and was willing to take it.

Now, while clearness and good definition are things of great importance and go far towards making up the picture, they are only the means of producing it, and not the picture itself. That should be something superior and beyond this, even as the artist while he labors at his canvas has more regard to the artistic effect than the smoothness with which he lays on his colors.

The pose, the lighting, the expression, and the truthfulness of the likeness, are the all-important things to be considered and attended to, while the photography is only the adjunct and means by which the result is attained.

A likeness should be something more than a mere map or diagram of the face, and while in some cases the public are quite satisfied with such results, we should be unwilling, even if our customers are pleased and willing to pay their money, to give them any but such work as will not only prove entirely satisfactory, but be a credit to ourselves, and thus a source of future revenue.

It is also true, if we studied only our pecuniary advantage, we should find it greatly to our profit to always secure the very best thing that can be made, even if at the time it seems at a loss. Remember that each card sent out is an advertisement for good or evil, and that sooner or later the public will learn to discrimi-

nate between what is good and that which is bad, and we shall find the extra pains taken a good investment.

I think photographers too apt to underrate the ability of the people to judge of their work.

We know that those who have succeeded best in business are the ones most deserving of success, from having brought the greatest amount of energy and skill into requisition, in making a superior class of work, and that the public are not slow in finding out where they will secure the best results, and manifesting a willingness to pay a fair price for the same.

I can hardly think there are any belonging to our Association who would degrade the business by putting the price down to about nothing, because a competitor has done so. Persons who do this are those who would care too little for the advancement of the art to be interested in our Society, so I doubt if we have any of that class among us. And yet we must meet them in one way or another; but let us never do it on their own ground. Rather when they go down let us go up, and as we advance the price let us also advance the standard of our work, never making a picture for less than we can afford, and do our best on it.

Better do half the business at double the price, thus giving ourselves less labor, fewer vexations, and more profit.

It is not possible that the man who does cheap, poor work, will succeed, while he who does a superior kind shall fail; and it is hardly possible that one can take more pains than will be to his advantage in the end.

My own experience has taught me that the best negatives are those from which the profits are derived, while from the poor ones nothing is made, at least in duplicate orders, unless the subject has chanced to go where photographs are never taken. Then let me repeat that we should always endeavor to elevate the art to that dignity and importance which it deserves, and demand for our labors such compensation as will enable us to put forth our best efforts in all cases.

Of course there will be degrees of excellence and differences of location, so that all cannot charge the same for work; and while it would be as impossible to reach uniformity in price as in quality, still there is no necessity that any one having the least fitness for his profession, should do himself and the craft the injustice of lowering the estimate in which photography is held, by putting the price so ruinously low that he can hardly eke out an existence.

Of late much has been said and written in re-

gard to artistic posing. This subject cannot have given it too much thought and study.

In every person's make up there is a choice of presentation, and in almost every one's physiognomy some strong ruling characteristic. It is a matter of artistic taste wholly how best to dispose of these. If pleasing to the eye and not exaggerated in life, give them prominence in the picture.

Whatever is desirable and pleasing make useful to the camera. Have the accessories and mechanical part of picture-making so entirely under command as to subserve the purposes of art, thus enabling the sitter to be taken in any attitude or angle suited to his requirements. A perfect likeness is not always, nor *often*, a good picture. In fact, we should give little heed to literal resemblances, and aim for the beautiful. Study to repress the real that is objectionable, and develop the ideal.

It is quite astonishing how much can be achieved in this direction on a small capital. In no age have the masters been content with reproducing. They create, or rather sublimate material, till there is suggested what we *would* be; and the possibilities of the "human face divine" are in a measure realized.

Being a worker and not a theorizer, I fully appreciate the difficulties involved in these injunctions. Nevertheless, I repeat, strive for continual advancement in this neglected branch of photography.

The human family are much alike. One article of their faith is a dread of having a picture taken.

Our first effort, therefore, is to make the art alluring, by good work and courteous attention, so as to drive from the public mind the foolish whim that we are as much to be shunned as the dentist.

The majority of my sitters assure me in the most confidential manner that they would as soon have a tooth drawn as a picture taken. It takes tact, and time, and talk, and patience, to uproot this hereditary and deeply settled humbug.

At the outset convince the sitter that the operation is quite delightful, and endeavor to sustain this fact by *making* it so; never ourselves making a serious matter of it.

The little moment, when it comes to keeping still, should be beguiled in ways various. Talk to them in a way that will tend to keep them quiet, and at the same time animate the expression and prevent that fixed look of the eyes so apt to come; also watch any change that comes over the countenance, and endeavor to prevent

it. You will find very few annoyed by this, and there will seldom be any movement.

The sitter never does as well left to himself and silence. The time seems much longer to him, and he loses faith in his appearance and position.

And now a few words in regard to my experience in picture-making.

During the time that I have been in the business I have always attended to my own sittings, and have ways peculiar to myself of doing it; and whatever success I have met with has been from the constant study and attention given to this important part of the business. I do not claim that my ways are superior to those of anybody else, but my experience has been of considerable benefit to me, and you may be interested to know how I manage.

I am able with my method to obtain the desired effect of light and shadow very readily, and with but little labor, thus enabling me to accomplish a sitting in the shortest possible time, a thing quite desirable where you have a good number to make. I have a very large operating-room, and also a large light (18 x 24 feet), consisting of a top and side-light of northern exposure. The side-light runs to within about a foot of the floor, and is covered with two sets of curtains, one of white and the other of blue muslin, sliding upon wires, so that either or both may be used at pleasure.

The top-light is arranged as follows: Underneath and at right angles with it, and running entirely across the room from the point where the side and top-light intersect, a framework has been built, and divided off into three sections. These sections are each fitted with a track, upon which other frames are laid, running upon rollers and balanced by pulleys and weights, so that by a touch they can be run on, or off the light in a moment, and will stay at any point where left. These sliding frames are first covered with ordinary mosquito netting, and over this is carefully laid a covering of white tracing paper prepared with a coating of white wax and turpentine. This shuts out all direct rays, and gives a beautiful soft white light.

Now, when I have seated my subject under the light, as I may do at any point in the room, and having placed the camera and background in position, I have a stick or rod about twelve feet long, made very light for the purpose, and standing at the camera talking to my sitter, I open or close the screens at any point I may desire with this rod, at the same time and in the same manner with the stick, lighting or darkening the

background without leaving my position at the camera.

I would here state that my backgrounds are made with two frames, one inside the other, similar to the side screens commonly used, only while the screens are hung in the centre the ground is hung from the bottom of the frame, so that the top can easily be tipped back or forward, as I may require it to be light or dark.

The stick has a hook at the end, so that I am able to push the ground back or pull it front, and also pull the top over or push it back until I get the exact shade I wish. This arrangement of light and backgrounds saves a great many steps, besides allowing me to watch the effect of light and background from the camera, which is the point, of course, from which the picture is seen. You will readily appreciate the advantage of this manner of lighting over any other where you are obliged to leave your camera and go to a distant point of the room to arrange screens.

I have also found that, even with this careful arrangement, there are many points at which the light is too strong, or the shadows too weak, and the effect may be improved. In order to accomplish this I have resorted to the use of another rod, upon the end of which is a very light frame about three feet square, covered with tissue-paper. This frame is held in the hand during the exposure, shutting off the light here and throwing it on there until I get as nearly as possible what is needed.*

At first you might suppose this treatment would cause the subject to move, but I have found it quite the contrary. In fact I think it preferable to the deathly silence that usually prevails during the sitting, and often gives a much better expression than otherwise would be secured, and, as I have said previously, I have found it requires much less time to obtain the desired effect than it does where stationary screens must be adjusted previous to the exposure.

I suppose I would hardly be able to secure a patent upon this simple arrangement for managing the light, at least I shall not endeavor to, or object to its being tried by any of you who may desire to test it.

A drawing of my light may be seen in the *Photographer* for this month, from which some idea of the arrangement of screens may be obtained.

* Mr. Kent here illustrated his point by calling up a subject, and showing how the light could be varied and modified by simply manipulating a common palm-leaf fan about the head and face. The experiment was an exciting one, and loudly applauded.—Ed.

Having thus briefly described my method of working, and hoping that some may be benefited by it, I will close by saying, let us all strive to bring the art to greater perfection, knowing that the most diligent workers are the most certain of success.

A vote of thanks was given Mr. Kent, for his very able and instructive paper, by a rising and unanimous vote.

Mr. Pearsall, of Brooklyn, said: I would like to inquire why it is the public feel as though they had rather have a tooth drawn than a picture taken?

Mr. Kent.—It is because they have been taught by photographers that to have a picture taken is a very disagreeable thing to do.

Mr. Pearsall.—My experience is, that I don't want subjects to keep still and become rigid as soon as they get up stairs.

Mr. Kent.—Speaking of being rigid reminds me of a very portly old gentleman who was bracing for a picture, and during the sitting I heard a crash. I looked around and found, not that the building had fallen, but that the old gentleman had braced so hard that he had split the back of the chair. The picture didn't turn out well.

Mr. Southworth.—Take the picture when they don't know it.

Mr. Hessler.—The impression prevails, that it is easier to go to a dentist than to a photographer; the trouble is, it has been a custom with many photographers to place the head-rest in position, and then force the head into the rest. The way to do is, place the head in position, and then adapt the rest to that position.

I usually come the candy dodge on children, get them good-natured, keep them interested, and then, when you catch their eye, take their picture.

Mr. Whitney, of Norwalk.—I would like to ask Mr. Kent the color, size, and shading of his background.

Mr. Kent.—My backgrounds are of various sizes, and so far as the shading of the background is concerned, it makes but very little difference.

Mr. Kent was asked if he ever took any pictures without the head-rest. He replied: I never take a single picture without any

head-rest; I take groups without the head-rest, the distance being so great a slight move will not affect the picture.

The President, in addition to the vote of thanks given to Mr. Kent by the Association, again thanked Mr. Kent in the name of the Association for his efforts to instruct the Association in the art of photography.

President Bogardus said: Hearing Mr. Kent speak on the subject of skylights has reminded me of something I saw in Boston two years ago. I have never seen it used in but one gallery, which was in Mr. Whipple's, who has the largest room I ever was in.

It is square, his skylight is as large as an ordinary two-story light, no side-lights. He had, just over where he sits his subject, a pulley with a cord running along to where he stood at the camera. At the end of that cord he had a square frame covered with tissue paper. I saw him seat a gentleman who had hollow cheeks; after seating him, without going from the camera, he lowered that screen to within a few feet of the sitter's head, and it lighted up the whole face, and removed the effect otherwise produced by the hollow cheeks.

Mr. Kent.—The contrivance I described will produce that effect; the exposure will be a little lengthened, yet you keep your subject quiet, and you will attain the desired result.

Mr. Webster, of Louisville, referred to the statements made by Mr. Schoonmaker, of New York, at the first session, respecting the "Wing Patent Slide." He desired to have Mr. Southworth (who was interested in the patent) given an opportunity to be heard.

The President stated that this Association could not decide upon this question. It was for the courts to decide, and he believed that the courts had decided the question. [Applause.]

Mr. Southworth (indignantly).—No, sir; they never did.

The President.—Mr. Southworth has the floor.

Mr. Southworth said he was sorry that he had been forced into this position by the officers of the Association. He desired to say nothing personal, but had come here to discuss the questions of photography

brought before them. He had heard these statements made by Mr. Schoonmaker year after year, and had never replied, but he now desired to state that the assertions of Mr. Schoonmaker were entirely false. The case had never been decided. If he had the time and opportunity he would lay the case before the Association, take the vote upon the consciences of the members, and abide by it forever. If the *Photographer* chose to make unfair statements it could do so. He was not prepared to go into a newspaper controversy, but when editors attacked him personally they made a mistake which he hoped he never would make. Outside issues had been dragged into the case. Four of the judges of the Supreme Court of the United States were in favor of his side of the question. The case must go to the Supreme Court, and be decided by the majority of the judges, and until that was done the "Wing Patent Slide" was not dead. He had the names of some of the most prominent men in the Association—Messrs. Anthony, Holmes, French, and others—stating that he had a good claim to the patent. He would trust the President to right this question, because he believed that he was a conscientious man, and he would leave it to the Association, for he believed they would do what was just. This patent was all he had after thirty years of labor.

President Bogardus said that Mr. Southworth stood high among them as a man of integrity and honor. [Applause.] Mr. Schoonmaker had made a statement, and Mr. Southworth had had an opportunity to reply. But the Association had no right to decide upon questions of law.

Mr. Southworth said he had waited for three years for this morning, and he had been forced into the explanation. He had said as little as he could and preserve his self-respect.

Mr. Johnson, of Scranton, moved that all difficulties between members be excluded from the business meetings of the Association in future. Agreed to.

Mr. Southworth.—And from the official organ.

Mr. Henry T. Anthony made a few remarks in regard to the "Wing Patent,"

his name, or that of his firm, having been mentioned by Mr. Southworth, in connection with the matter, as having indorsed the patent.

Mr. Anthony said: As the name of our firm has been mentioned in connection with this patent, I would like to explain the circumstances to which Mr. Southworth alludes. The original Southworth patent was for a certain mechanical arrangement by which the plate could be moved. Any other mechanical arrangement, by which the plate could be moved, would not be a patent. In the reissue the broad claim was made for a patent for moving the plate, no matter in what manner. At the time that claim was made I didn't consider a patent should be issued on it. I went and got a man who was skilled in the matter, and with him carefully looked over all the papers—the patent and the reissue—analyzing the whole thing until it came down to this question: "Can any man patent what I can do with my hand?" The gentleman with me answered: "It is a custom to patent personal actions; such patents are frequently granted." It was on that examination I gave to Mr. Alsby the result of my investigation as to the patent, as far as a patent existed. It was a patent granted under the authority of the United States laws. I had never investigated whether Mr. Southworth was right in the original patent or not. I merely investigated whether the original claim as reissued—as claimed by them—was a valid claim, and finding they had a valid claim as to that, I stated, without going into the original invention, the patent was good, and could be sustained; that is the explanation of my connection with the Southworth patent.

Mr. Southworth.—"I thank you, sir."

Mr. Gardner, of Washington, moved that a committee be appointed to fix upon the place for the next meeting of the Association.

Mr. Hawkins, of Alabama, hoped the South would be represented in this question.

Mr. Fay moved that the committee consist of one from each State represented.

A discussion ensued as to whether the question should be referred to the committee of one from each, or to a majority committee from all the States.

Mr. Fennemore, of Philadelphia, said there was no necessity for a committee at all. There had been only three places named, and no difficulty would be found in selecting one.

Mr. Hawkins, of Alabama, moved to amend that a committee of three from each section be appointed.

Mr. Knight, of Topeka, Kansas, wanted to know where the line was to be drawn between the North, South, East, and West, because where he lived they called Missouri and Iowa "East."

Mr. Fitzgibbon, of St. Louis, moved that the President appoint a committee of thirteen to locate a place for the annual meeting.

Mr. Fay contended that one from each State was the proper committee.

Mr. Elrod, of Louisville, said he could settle it in a moment. Come to Louisville; we will show you the biggest hotel, the longest bridge, the prettiest women, and the fastest horses in the country. [Cries of "No electioneering," and laughter.]

Miss Jennie Fleming, of Council Bluffs, Iowa, said she begged leave to differ with the gentleman. They had as pretty women in Chicago as in Louisville, and just as fast horses. [Loud and long-continued applause and laughter.]

A division was called upon Mr. Fitzgibbon's motion that the Chair appoint. Carried—102 to 54.

Mr. Vansyckle, of Philadelphia, from the Committee on Picture, reported that Mr. Gutekunst was prepared to take it tomorrow morning at nine o'clock in front of either Horticultural Hall or the Academy of Music.

Mr. Fennemore, of Philadelphia, said it was very necessary that the members should be prompt, as the light from the streets running east and west was hard to contend with, and it would have to be taken early, before the sun got into the street. Those that came late would be left out.

The order of business was announced for the afternoon, and the Convention adjourned until 3 o'clock.

AFTERNOON SESSION.

The Convention reassembled at three o'clock P.M., President Bogardus in the chair.

Quite a number of lady photographers were in attendance, and occupied the front

seats, specially reserved for them by resolution of the morning.

THE ANNUAL ELECTION.

Mr. J. F. Ryder, of Cleveland, chairman of the Committee on Nominations, presented the report of that committee, as follows:

For President.—A. Bogardus, New York.

For Vice-Presidents.—J. F. Ryder, Ohio; F. Thorp, Ohio; Samuel Holmes, New York; Edward Anthony, New York; A. Hall, Illinois; B. Gray, Illinois; J. H. Kent, New York; F. Rowell, Massachusetts; Geo. H. Fennemore, Pennsylvania; E. S. Wormel, Maine; W. S. Wilder, New Hampshire; L. A. Peirce, Vermont; C. T. Miller, Rhode Island; J. K. Bundy, Connecticut; J. Reid, New Jersey; D. R. Holmes, Delaware; N. H. Busey, Maryland; Alexander Gardner, Washington, D. C.; D. H. Anderson, Virginia; H. B. Hull, West Virginia; C. M. Van Orsdell, North Carolina; G. S. Cook, South Carolina; C. W. Motes, Georgia; J. H. Lakin, Alabama; S. T. Blessing, Louisiana; H. G. Fetter, Indiana; B. F. Hall, Michigan; I. B. Webster, Kentucky; W. H. Sherman, Wisconsin; E. R. Curtis, Wisconsin; S. T. Wiggins, Minnesota; W. H. Jackson, Nebraska; Mrs. Barrett, Iowa; A. J. Fox, Missouri; W. K. French, Tennessee; W. H. Rulofson, California; H. B. Hillyer, Texas; E. E. Henry, Kansas.

For Treasurer.—Albert Moore.

Executive Committee.—V. M. Wilcox, W. Irving Adams, W. H. Rhoads, A. Hesler, J. Carbutt.

Committee on Progress of Photography.—W. J. Baker, H. T. Anthony, J. C. Browne, J. Carbutt, Elbert Anderson.

Corresponding Members Committee on Progress of Photography.—Dr. H. Vogel, G. Wharton Simpson, M. A.

Signed by the Committee on Nominations.

J. F. RYDER.

W. J. BAKER.

A. HALL.

J. CARBUTT.

ELBERT ANDERSON.

The above were all elected unanimously, and the election was made by acclamation.

A speech was called for from President Bogardus, who responded as follows :

LADIES AND GENTLEMEN: I have to make a stereotyped speech, the same as I did last year. When I assisted in the formation of this Association, two years and a half since, I little thought that I was the man for your chairman; there were so many men of more experience and better judgment than myself that I declined taking it, but I was told that if I would take it for the first few months, until we would have our meeting in Boston, that that would end it. I took it for that period of time, and at our meeting in Boston they told me I hadn't held it for a year yet, and insisted that I should hold it longer; then we went to Cleveland, and by your kindness I was elected again. I certainly feel grateful for the honor that you have conferred upon me. I know I have served you as faithfully as I could do.

I have certainly worked for the good of the photographers of the United States in every respect and sense. [Voices—That's so.] I was in hopes that you would be satisfied with my efforts, and let me off. It is a great tax upon me. It is a tax upon my time and means, and I should have been far better pleased, knowing there are far better men, had you elected some one of them in my stead. [A voice—Name him.] *President Bogardus.*—Well, I should have to begin the roll and call it down. [Laughter and applause.] I think I have done my share, and I believe in rotation in office, in this respect at all events. I had fully made up my mind I should insist in some one else serving, but your vote is so flattering that, with your consent, assistance, and promise to back me up, I will promise to do what I can for you for another year. [Applause, and cries of "We will."]

Mr. Ryder called up his amendment to the constitution, providing for the appointment of a Phonographic Secretary.

Mr. Fay moved that the proceedings of the Convention be furnished by the Permanent Secretary to all the photographic journals in the United States, with the request that they publish the same.

Mr. Fay insisted upon his resolution, and was supported by Mr. Fennemore, of Philadelphia, and Mr. Bendann, of Baltimore, and was opposed by several members.

Mr. Wilson said, as editor of the *Philadelphia Photographer*, the official organ of the Association, and as Permanent Secretary, I shall take pleasure in furnishing an

early proof of the proceedings of this Convention to the publishers of any photographic journal in the country. I will do that without any motion; I have never been asked for any such thing, but will give it gladly, and have already done so voluntarily.

The question was put on Mr. Fay's resolution, and carried.

The following resolution was then read by the Permanent Secretary, from Mr. Ryder.

Whereas, in consideration of the prompt, skilful, and accurate manner in which the proceedings of the Convention of the National Photographic Association, held last year at Cleveland, Ohio, were reported by Benjamin Weaver, and in consideration of his central location, and

Whereas, in consideration of his constant effort to familiarize himself with our art, and in consideration of his being a member of our Association,

Therefore, be it *Resolved*, That the said Benjamin Weaver be, and the same is hereby appointed the Phonographic Secretary of this Association, whose duty it shall be to take accurate short-hand notes of the proceedings of the Convention of this Association, to be transcribed, and published in the *Philadelphia Photographer*, at a compensation of, and not to exceed (\$10) ten dollars a day for the time occupied to take the notes, and (40 cents) forty cents a page for legal cap, for a transcript thereof, together with a sufficiency to cover his necessary expenses to take said notes. This resolution or appointment to take effect and be in force from and after the 5th day of June, 1871, and to continue during good behavior.

Mr. Wilson spoke in favor of this motion, and declared his satisfaction with Mr. Weaver's services last year.

Mr. Ryder's amendment and resolution were adopted.

Mr. Bogardus presented his appointments as the Committee on Location, as follows :

Messrs. Southworth, of Boston; Trask, of Philadelphia; Cady, of Cincinnati; Baker, of Buffalo; Brown, of Baltimore; Fitzgibbon, of St. Louis; Hesler, of Chicago; Gardner, of Washington; Hawkins, of Alabama; Knight, of Kansas; Whitney, of Connecticut; Webster, of Louisville, and W. H. Moyston, of Memphis.

President Bogardus—I would state to the Convention, we have with us Mr. Samuel Holmes, of New York. Some of the members of the Association have requested that Mr. Holmes be heard from. [Cries of "Good; let us see him."]

Mr. Holmes ascended the platform and addressed the Convention as follows :

LADIES AND GENTLEMEN OF THE CONVENTION :

I had no idea, in coming into this room and taking a back seat over there, that your President would spy me out, and, above all, take the liberty of drawing me on the platform here ; I am sure that is not in your programme at all. It gives me great pleasure to see you in Convention. I have read your proceedings heretofore with great interest, but it is the first time I have had the opportunity of meeting you. Passing through Philadelphia on my return from a little trip South, I thought I would spend a few hours here with you. I am delighted to see you, and I shall be glad to assist you in any way I can in whatever plans you may form. [Applause.] I trust as you have gone onward, year after year, you will continue to go on hereafter, and that we shall see not only the hundreds that are represented here to-day, but thousands coming up and doing what they can towards elevating photography to the high place to which it belongs. Mr. President, I did not come here for the purpose of making a speech, and thanking you for the honor which you have conferred upon me, I will ask you to excuse me from further remarks.

A paper from Henry J. Newton, Esq., of New York, was read by the Secretary, as follows :

IF NOT, WHY NOT?

I have selected these words as the motto to a few thoughts which they very naturally suggest. They are words which you will find recorded on almost every page of the experience of practical photographers. There is also the twin sister of the text: If so, why so? which is not, however, as often suggested to the mind, because the chemical compounds which are used in photography are expected to give certain uniform results, and viewed from a business standpoint, you are not expected to ask yourself why the expected results are obtained, but it is when they fail to do their appointed part, and appear in open rebellion against what you had supposed fixed and permanent laws, that the inquiry is instituted and the mind set to work.

I do not propose to answer all, or any of the interrogatories which the theme will naturally suggest, but my object more particularly will be to stimulate photographers to qualify themselves to answer and understand as far as possible the causes which are operating to produce or hinder the most desirable results.

Success, as a photographer, depends primarily upon an intelligent understanding of it as a *business*, as an *art*, and as a *science*.

When I say a successful photographer, I do not wish to be understood to mean those who simply make it a paying business ; I mean as well those who make the best photographic work. It does not follow, as a matter of course, that the best photographer will succeed in making it a paying business. Very different qualifications are necessary for successful business operations from those required for producing perfect photographic results ; it is not so much the quantity of intellect as the quality and training which is required. *Ingenuity*, which is synonymous with *genius*, is a quality of mind absolutely necessary for success in this modern art. With all the powers of intellect of our most renowned statesmen, and all the knowledge and information attainable on the subject, one would not succeed, except by chance, in making a passable photographic negative without a large percentage of *ingenuity* in addition to all other qualifications. This fact has more particular reference and bearing upon the artistic branch of photography, and it is the reason why many with a large degree of intelligence and all the information possible to acquire, never succeed in producing anything satisfactory to themselves or others. Almost as reasonable would it be for them to aspire to the productions of a *Church*, or a *Biersadt*, without their genius.

It is this quality of mind—not necessarily the same in quantity—which has decorated the walls in the hall above with beauty, and in the superlative excellence of many of the productions exhibited does the living finger of *genius* show his magic power. Never has the effect of light and shade been so well understood as now ; its wonderful power in giving strength, character, and force, to the picture, has been more fully recognized, and more intelligently applied and discussed within the last few years, than ever before in the history of photography. In Dr. Vogel's Handbook, much more space has been given to the elucidation of this subject than in any other work of the kind extant.

A very large majority of the members of this Association no doubt make photography a business, and I wish I could make you all successful in it as such. It is not reasonable, however, to

expect such to result. It has no peculiarity different from other branches of business, which will insure such an end. Some succeed in merchandise, while others with equal or perhaps superior advantages fail. It is so in all branches of trade, and there is a reason *why it is so*. Economy is not only the rudimentary lesson in business, but it is the very foundation, the *pillar*, on which any business to succeed must rest. Therefore, any one who is naturally, or from habit, negligent and improvident, and allows that which might be *saved* to go to waste, will not be likely to succeed in this or any other business. A study of the fundamental rules of business is not one of the employments in which photographers delight; as a rule, it is a subject, also, on which books and pamphlets on photography are mostly silent. The necessity for such information has not been recognized, and again, most persons of mature age become possessed with the idea that they know as much, or more, how to conduct their own business than any one can tell them. This is frequently a fatal mistake, and I should like to impress upon your minds, the great advantage there is in a thorough acquaintance with business principles, and the avenues which lead to success, and those which tend to disaster and ruin.

Having myself been *trained* to business in my boyhood, it is natural that I should notice critically the business modes of such photographic establishments as I from time to time may visit.

It is this fact which is my apology for calling your attention to the subject. It is an easy thing to learn these business rules, but not always so easy to put into practical operation. You may be in possession of all other qualifications and not succeed, merely because you lack these. When, however, you enter the chemical departments of photography, you enter a realm in which your relation to cause and effect are changed; you are confronted by fixed and unchangeable laws, which you cannot alter or modify. The same results will always obtain, when the same causes operate, under the same circumstances. It will be well to always bear this fact in mind; it will be especially advantageous in narrowing the field of investigation, when you are searching for the *disturbing* causes which are continually developing their *effects* in this department, and forcing that often recurring question upon your mind: "*If not, why not?*" You are necessarily confined to apparent effects, which manifest themselves from time to time in your search for answers. There is an impenetrable veil which effectually shuts out from observation or investigation causes which are

primary in their relations to action in matter, whether chemical or otherwise. You can only judge of *what will be by what has been*. In searching for the truth great care should be taken not to be hasty or premature in your conclusions; do not substitute *belief* for *actual knowledge*, which are so often treated as synonymous terms, and the inevitable result is the substitution of error and falsehood for truth, and instead of becoming extricated from trouble, you are forced still deeper into perplexity and doubt.

Know that you are *right*, or approximate as near to actual knowledge as the circumstances which surround the case will admit of.

There are those who ignore *experimenting* entirely; they have not the *time* or *desire*. *They know* all that they deem actually necessary to make a *salable* photographic print; they have an eye to *business*, *pure* and *simple*; there is no enthusiasm in such for their beautiful art; no thought or effort for its advancement or elevation; it is simply how much income can be derived from the production of photographic pictures. This class, as a rule, are soon left behind, pass into the shade, and are forgotten. Such must be the result, for photography is just in its vigorous youth, advancing with rapid strides to manhood and position, and those who anchor their little craft in a still pool will find in a short time that their hulk is on the *bottom*, and in the *mud*, remaining only as a monument to the folly of trying to remain stationary when all else around was moving on.

Of the several means within the reach of every one to qualify themselves to answer such questions as are continually arising, experimenting is important, whether used in demonstrating or varying the sayings and doings of others, or in working out theories of your own. What you demonstrate by actual experiment leaves a more permanent and lasting impression on the mind.

There is another broad and popular avenue to knowledge such as you desire, or should desire, in the many ably conducted periodicals published here and abroad.

Read all that is written on the subject, whether in book or pamphlet form; do not fear that you will *know too much* on the subject; digest well what you glean from the sayings or writings of others, and you will often find occasion for practical application of much thus acquired. Last, but not least, is the associating of yourselves together, a most important means, by which you may be enabled to answer many of the interesting questions continually being asked.

You are expected to mutually help and assist each other, by freely communicating such knowl-

edge as you may have obtained in your experience, if deemed useful and important.

Do not let yourself become possessed with the idea that you are the *proprietor* of some *valuable secret*, on the keeping of which, to a large extent, depends the success of your business; the probabilities are that your neighbor could not use your secret *successfully* if he had it. By adopting the principle of free exchange of thought and experience, with a fixed purpose and desire to be of mutual advantage to each other, a vast fund of knowledge must accumulate, which will in time become a great reservoir, from which you can all be supplied. The action of many minds running in the same direction must form ultimately (like many streams of water) a mighty river. Strong currents of thought, all tending in one direction, must result in one mighty stream flowing on to the great ocean of thought, on which you will find pictures more beautiful than the "wet sheet and flowing sea."

The beautiful landscape, with its enchanting shades and sunny hills; the human form and face, the most beautiful and perfect expression of Divine thought in material existence, will be there. Yes, every beautiful form and everything which adorns nature, everything which tends to enchant the vision, will be represented, and each will tell their silent tale of the mystic power of *light*, which the human intellect has subdued and harnessed to the CAMERA and the LENS.

A vote of thanks was given Mr. Newton.

Mr. E. L. Wilson moved that a vote of thanks be tendered to the reporters of the press and the newspapers who had already shown that they fully appreciated the interests and objects of the Association. It was greeted with applause, and adopted.

Mr. Fay, of Louisville.—There was a communication received from a brother photographer this morning, in regard to the disuse of cyanide. There was no action taken upon that, and I desire to hear a discussion on that subject.

President Bogardus.—This is a good time to make some remarks on that subject.

Mr. Henry Anthony was called for, but was not present.

Mr. Fay said:

MR. PRESIDENT AND MEMBERS OF THE ASSOCIATION: I have tried various methods of fixing pictures, and I find that cyanide is the best thing that I can get hold of, and in order not to have fumes permeating my

dark-room I take a glass bath with a dipper, and I have a cover to my bath, which my dipper runs through, just so far as to allow the bath to close tightly when the dipper strikes the bottom. I make the solution weak; I close it in the box, and I judge by my experience when the picture is fixed, and five times out of six when I pull it up and take it off from the dipper it is fixed. On taking the picture out I close up the bath, and I get rid of the fumes. The general practice of most photographers in using cyanide, is to use it in a flat dish, putting it in and turning it up and down.

President Bogardus called upon Mr. Clemons, of Philadelphia, to make some remarks on his process of silvering.

Mr. Clemons said:

LADIES AND GENTLEMEN: I don't know that I have anything to say that is very new. You all know how to silver paper. I have followed a mode of silvering paper, though, which I think is new to a great many of you. I have shown it to a great many and they all appeared to like the idea. There are a great many prints spoiled in not having the paper properly silvered.

The silver is in the best condition for printing generally, when it is in a weak state. Strong silver, as a general thing, is not good for most of the negatives made at the present day. If you silver strong the shadows will be dense and thick, but if the silver is weak the prints will be more uniform throughout.

Oftentimes in taking a dozen cards from a sheet of paper that has been silvered, they will print uniformly alike, but when you come to tone, you will find it is then lacking in a great many cases. It all proceeds from the silver itself, which fact I have thoroughly tested. You can test it by taking a piece of paper from the silver solution and hanging it up. In proceeding to silver a sheet of paper, I generally turn the right hand upper corner so as not to get the silver on my paper; my bath lies in front of me; I hold the sheet in a vertical position and slide it on the edge; I never raise a sheet of paper to look if there is any bubbles there. I simply give it a little tap and that will disperse all bubbles. In lifting the

sheet of paper up I commence at the upper right hand corner, raise it very slowly, keeping it in a vertical position all the way.

(Mr. Clemons here illustrated with a piece of paper his manner of manipulating a sheet of silvered paper.)

Since I have attended the meeting here and the meeting at Cleveland, it has been asked what strength of silver I used. In a cloudy day I would not use over eighteen grains of silver; a man that is printing can come very near telling how much he is using. Let him weigh his paper dry, then silver it, and thoroughly dry it, and weigh it again, and the difference will be just the amount of silver he has. Such weather as this I use about eighteen grains. I float one minute and a half in a small box; I fume five minutes, which I find is near the point.

Now with your silver at that low state, after floating several sheets of paper, it will be apt to foul; to cure that I take one ounce of camphor and six ounces of alcohol, and when I find the silver solution has albumen in it, which is readily told, for when it is filtered it will soak up, and the bubbles will not break readily; if you will add camphor to that, these bubbles will break and go away; as soon as the bubbles leave, you will have sufficient camphor, the camphor grabs the albumen and holds it, and when you come to filter the solution you will find it will not froth up. After filtering stand it out in the sun in a bottle. I didn't think I would be called on this afternoon for remarks; if I had I would have written out a formula and brought it up. In the morning I will bring up some for those who wish them.

Question.—What paper do you use?

Answer.—I always use Clemons's.

Question.—Do you use plain silver solution?

Mr. Clemons.—At times I use plain silver solution, but I find fused silver is best without the addition of anything, except when you are using at a low stage. To every twelve ounces of silver use one ounce of about 95 per cent. alcohol.

Mr. Fennemore, of Philadelphia.—It struck me a few words from me might perhaps be acceptable, from the fact that what my friend Mr. Clemons said, I think, will apply only in a few instances. We have

got to go farther than that. We have got to know why a weak solution is better than a strong one, and why it is necessary we should put camphor in it in order to precipitate the albumen. You can take almost any ingredient that will cause a precipitate in a silver solution, and carry down the organic matter, therefore the camphor answers the purpose. I will take the dirtiest bath ever made, and by simply adding salt enough I will carry it down, although I may carry all the silver down too; it is simply a matter of how dirty it is, and it is just so with camphor.

I am using Mr. Clemons's paper now some, but I don't indorse all he says, neither do I indorse as the most economical a weak bath. The reason why a weak bath is necessary for Mr. Clemons's paper is because he don't salt very strong. Just so strong as your salt is, just so strong you must have in proportion your silver. I can take a solar negative and make a harsh print from it, and not use over fifteen grains of silver to the ounce. I think I demonstrated that to a certain extent in one of my little articles in the *Photographer*; take a piece of porcelain, which is the best because non-absorbent, and a pure substratum of albumen; put it in the bath, and you will produce a strong print with a solution of silver of only five grains to the ounce, but it will be to a certain extent a harsh one. The smaller the amount of salt, in connection with that albumen on porcelain, the softer your picture will be, but if you apply the same to a sheet of albumenized paper you will find it is worthless, because the amount of organic matter in the paper absorbs it. Therefore the strength of your picture is in the same proportion with the amount of salt you add and to the density of your negative. The reason I speak with regard to weak silver solutions is because I think we have been working towards a false standpoint and false economy, so far as first-class work is concerned. A great deal may be done in this matter of keeping baths clean in using a stronger silver solution. You will find you can make more improvement by going back to old ideas. We want the albumen to stay on the paper; we don't want it to go into the bath.

Mr. Hough.—Did you ever use camphor?

Mr. Fennemore.—No.

Mr. Hough.—That is where I have got you. Camphor don't carry anything down; it floats; if you shake it up it don't precipitate any sooner.

Mr. Fennemore.—As an experiment, if you coat a plate with albumen, and silver it in a silver solution of about five grains to the ounce, you can get a strong print with it without any salt whatever, showing that the albuminate of silver is sufficient to produce of itself a strong picture.

Mr. Johnson.—In a weak bath we are very apt to form albuminate of silver instead of chloride of silver, which we are required to make to produce our picture, and the articles we use for the production of chloride of silver, to be used in connection with the albumen, has a great deal to do with the formation of true chloride of silver, which is necessary to produce fine prints.

Without the use of ammonia you cannot produce a strong print with a simple solution of silver. You must have relative proportions of chloride of silver upon the surface of the paper. The great trouble is with our paper; some of it is salted so highly it requires a very strong solution of silver, and some is salted so low that there is not that relative proportion of chloride of silver upon the surface of the paper to produce a fine print. I have taken simple plain paper and formed a chloride of silver upon the surface, and have produced a print that I would defy any member of the Association to distinguish from an albumenized print. I claim we want to keep the silver on the immediate surface, where it is brought in contact with the negative, and the action of light is brought directly upon the chloride of silver.

Mr. Spencer, of Michigan.—I like this idea of giving the amount of salt in the paper. I have had trouble about dissolving albumen in the solution in warm weather. In a solution of thirty grains of nitrate of silver I floated thirteen seconds, and it took the albumen off of the paper and destroyed the fine surface; now if it is true that the albumen must be coagulated in order to keep it upon the paper, I wish to know whether

we can't carry the solution so weak that it will, at any rate, not be carried out from the paper, or whether the sulphate cannot be used strong enough to coagulate the albumen quickly. When you go beyond that, so that you carry it off from the paper, you are going too far.

At this stage of the proceedings an invitation was received from Messrs. R. Newell & Co., photographers, that the Association meet at a certain place and have a group picture taken, at such a time as the Association might designate.

Mr. Thorp, of Bucyrus, Ohio.—GENTLEMEN OF THE CONVENTION: Circumstances will compel me to leave probably before tomorrow's session. There is one little item that has been overlooked in all the sessions I have attended here, and I think it will be of considerable interest, because it touches our pockets, and that is the price of our work. I am met almost every day by photographers who say they think our prices ought to be higher, but they say they dare not put them higher for fear they will lose their trade. I have been at work for the past year in a backwoods town in Ohio, demonstrating the fact that we can get higher prices just as well as not. In our little town I get five dollars a dozen for card pictures, and they are made in the same building for less than half that price, but that does not make any difference; I have as much work as I can attend to, and I honestly believe no photographer need have any fears in charging just as much for his work as he conscientiously believes it to be worth. You may be certain of one thing, that the public never will pay you more than you ask, and never will think your work is worth more than you ask for it.

President Bogardus.—If Mr. Thorp has that little circular he issued, I wish he would read it.

Mr. Thorp.—I have not got it. It has been thought also that our profession is crowded—that there are too many of us in the business. Any man that has enterprise enough to come out to this Convention ought not to be troubled on that score. About two years ago I commenced at the lower step of the ladder, and looking up I saw Mr. Bogardus, Mr. Kurtz, and some

others away above in the upper stories, and I saw that although our profession was crowded on the first floor there was plenty of room up-stairs; and there is where we want to go. [Applause]. If we make good work and ask a good price for it, by that means we will get the money into our pockets and not consume too much time. And in regard to the manner of investing our money, I think if we would pay out ten dollars for photographic literature where we pay out one for patent rights, we would succeed much better. [Applause.]

A very handsome bouquet was presented to President Bogardus by his employees, who were present, for which the thanks of the President were given.

Mr. Pearsall, of Brooklyn, spoke of the necessity of having more practical knowledge in taking pictures, and the managing of the customer who desires a good picture, as follows:

GENTLEMEN: I desire to call your attention to matters of fact that come within my observation and experience continually.

I know nothing about *theory*; all I know about the art of photography is thoroughly practical. I believe any of the known processes of the day will enable a man to take a good picture if he goes at it right and puts his mind on it.

Now about the arrangement of the skylights. Every man says his neighbor's light is better than his own. I think the same way, notwithstanding I am getting tolerably fair results. I don't think the skylight has got anything to do with it at all. The opening through which the light comes into your room is the thing. The amount of light that falls upon the subject regulates the amount of the deposit of silver that takes place upon the plate; therefore, with plenty of light, it will be a strong harmonious picture, full of detail, and again it will not. I have found this to be thoroughly correct, for without altering anything in my chemical manipulations or changing my dark-room. I have made pictures very desirable, and immediately afterwards made pictures nobody would accept.

Where does this important change take place? It does not take place in your chemicals or skylights or manipulations; it must be then in the light. The illustration you had here this morning: when Mr. Kent held a fan between the light and Mr. Wilson, you saw not only that the light

was reduced, but the shade upon the other side was reduced also; but the shadow was gone, for the fan intercepted it, and the light was toned down to a desirable point.

We all admire Mr. Kurtz's pictures. There is no man that uses so small an amount of light as Mr. Kurtz. It is not by keeping the light out of his room, but his contrivances for intercepting it, that brings such good results.

You can't make the camera make a picture. You must have the tact and taste behind it. Do not be deceived by looking into the camera, when the moment the color is obliterated from your plate your picture is worthless. [Applause.]

Another point spoken of this morning—the head-rest—the most abused implement belonging to the photographic studio. It has been the cause of very serious objections to having pictures taken. Who, to-day, can sit down and put his head against a pillar in this building, and force the head against it so hard it becomes painful? Will he go and do it again? No. Then, when using the head-rest, try and convey the idea to your sitter it is not to keep the body still, but simply to steady the pulsation—the breath—and illustrate it by putting your finger to the head of your subject.

In speaking of children, I have adopted a plan lately which I think very successful. I have my assistant focus the instrument, and stay by the instrument; I sit down by the child, and if I can make friends with it my road is clear; if I can't, I suggest bringing it in next morning, because there is no use wasting chemicals and time to no purpose. I use the head-rest for every child. I place the child on the mother's lap, get it nearly in position, keep my hand on the back of the head-rest all the time, and when I am ready, I say, "Now go on with your music," and when the child's attention is taken, I very gently place the head-rest to the head; if it moves its head I gently pull back again, and keep my hand there to prevent the child from moving, and in that way I prevent all bad lines, and the picture comes out tolerably successful. I wish some one would talk about the customer, and what takes place between the photographer and the sitter; and let manipulations go for a while. Let us have something about relative harmony of light, and the relations which exist between the proprietor and patron.

The Convention then adjourned until next morning at ten o'clock.

FRIDAY, JUNE 9TH, 1871.

Third Day's Session.

The Convention met at 10 A.M.

Prior to that time the members had been photographed by Mr. F. Gutekunst in front of the Academy.

The reading of the minutes was dispensed with.

President Bogardus exhibited to the members a camera thirty years old, which had been used when Daguerre first gave the process to the French government. It had been sent to the Convention by Dr. Dickinson, of Philadelphia, from whom it was procured by Mr. G. W. Cheston, of this city.

Mr. M. A. Root was introduced, and exhibited the first daguerreotype ever taken in Pennsylvania. It was made by Jos. Saxton, then employed in the Mint. It was taken with a cigar box for a camera, in November or December, 1839, on the same day that the daguerreotype process arrived in this country.

A steel-plate daguerreotype was also shown, executed in 1841, by Wm. G. Mason, ready to be engraved. Also, copies of photographs taken from daguerreotypes in 1842. Also a picture taken on silk by Mr. Southworth, of Boston, which had been presented to the speaker in 1854 or 1855.

Mr. Southworth said he had forgotten the circumstances. The picture represented his wife and sister, the latter of whom had worked in his studio ten years.

Mr. Root also presented a number of interesting memorials of the early history of the art, and stated that they would be deposited in the archives of the Pennsylvania Historical Society.

Mr. Carbutt, of Philadelphia gave notice of a resolution to appoint as an officer of the Association, a curator, who should take charge of the memorials, and have them exhibited at each annual meeting of the Association. Laid over under the rule.

Mr. Bogardus then delivered his annual address, as follows:

Again the rolling year has brought us together at our Annual Convention, and it is most gratifying to see such a large representation of interested photographers present—gratifying that so many see and feel the necessity of our organiza-

tion, and also because in the multitude of counsellors there is wisdom.

This is a proud day for photography!

Here is our Academy of Design; our school of instruction; our exchange.

I said at its formation, *iodine* imparted its color to seventy times its weight in water, and to-day the spirit that animated the determined few, has imparted itself to almost every photographer in the land, at least to every one that has a progressive spirit. To such as are content to plough in the old rut, we may not have made any impression, but to the men of the times, the Association has become a necessity.

The Association may not have done all that some members expected, but some people expect too much. The officers are men depending on their labor for a livelihood, and cannot be expected to volunteer to give all their time to its work; and again, living great distances from each other, cannot be brought together as often as would be desirable. Yet we claim much good has been done for the whole fraternity.

To such as ignorantly ask what good has the Association done, I answer:

It has given us an opportunity to compare our work with each other.

It has made the most selfish man amongst us admit that others could do good work as well as he.

It has created a desire in every member to improve.

It has through its members been the means of crushing some of the most outrageous and unjust patents that ever burdened a profession.

It has brought us in closer relation to the photographers of Europe.

It has given a tone of dignity to the profession, enabling us all to feel proud of our calling (for who does not remember when we were almost ashamed to acknowledge the craft), at this live gathering—this splendid Exhibition. Who is not proud to be a member of the National Photographic Association of the United States!

It has made us all study, will make us study more, and when we study we progress.

I think I will not be contradicted when I say, the different effects of *light* have been studied and experimented with more zeal during the last *three* years than during the previous *ten*. Also, as to positions. Posturing is now a profession, and to do it well needs careful study, as well as good taste and judgment. The old daguerreotype pose, front face with one hand on a book or the table, and the other on the person, *as if the siter was suffering from pain*, will not do nowadays; neither should all sitters be taken as

tragedians. You must use or show your taste in each and every sitting you make. Indeed, the operator of to-day needs more judgment than is required in almost any other profession. To stand at the camera, and suit the light and accessories to each varying face and complexion successfully; to be compelled to listen to the ridiculous requests of the Flora McFlimseys; the exquisite, who fears his mustache will be out of twist; the anxious mother, who wishes her crying babe taken with a smile, and the thousand other equally ignorant demands; and all this time to keep in good temper, and do the work in the usual short space of time allowed to each customer, is something that can be done but by few, and may almost come under the head of miracles. You must have a good light, and know how to use it; a good camera is requisite; your chemicals must be in order; but *brains* must do the work after all. In fact, gentlemen, we are not paid for the skill we are required to have; much of our time is taken up in trying to gratify some whim of the sitter.

We need more independence and dignity. The public have been spoiled, and seem to think the photographer is in duty bound to continue to make re-sittings until all the new dresses have been tried and all the most ridiculous ways of hair-dressing been pictured, and then forsooth, if the *lady* does not happen to be goodlooking, she feels at liberty to take either of the many impressions or *none*, as she likes.

It is time this way of doing business was stopped. Are we to make pictures for the public, that they may walk in and see whether they like their own looks, and if they are not pleased with an ugly face, be the work ever so perfect, are they to condemn and refuse to pay us for it? Or, in other words, are we to pay enormous rents, use expensive chemicals, employ experienced workmen, to let the public see whether they like their own looks? A little determination on our part will put an end to this kind of imposition.

Again, do not disgrace yourself and our beautiful art, by making pictures that are unfit to be shown among intelligent and virtuous people. Photography has been used to gratify the lowest and most degraded desires, and I now call upon every member of this Association to give his influence and aid in putting a stop to this curse—this blot upon photography. I suppose there are some that will continue this kind of work; but if they will do it in defiance of law, as well as decency, let them do it under the frown of every member of this Association.

I am glad to see so many young men engaged

in photography, and am gratified at their success. Many of the most successful men of the day are young, and are destined, as the art advances, to be most active in its advancement. Your speaker has now been engaged about twenty-five years, or a quarter of a century, in making pictures by light, and has seen all the wonderful changes that have been accomplished since its discovery. And with the same degree of progress for the next twenty-five years, what great wonders the young men of to-day are destined to see and take part in. Make yourselves ready to act well your parts, for it is surely coming. No doubt some will drudge along on the most common work to merely make out a subsistence; but there are higher points to be attained by photography.

See the wonderful cloud effects here in America, as well as the perfectly surprising instantaneous views of the ocean, by Robinson and others, in Europe. Science calls in our aid in all expeditions and explorations, by land or sea; be it the transit of Venus, or an eclipse of the sun, photography alone can picture it.

Who will tell us what wonders will be exhibited by the photographers of America *ten* years hence! 1881 will show beauties and progress, to-day unthought of.

During the late war in Europe, King William had his photographers, as part of his engineer corps, constantly and rapidly multiplying copies of maps of the country over which his army was passing.

In fact, photography is now one of the indispensable, and is necessary to the world's progress as well as its comfort.

The most of photographers are doing too many kinds of work, and cannot expect to succeed in all.

Life-size oil; also, life-size crayon; the various sizes in India ink, and, also, water colors; the same again on albumen paper; also, all the sizes on porcelain; plain work, from large cabinet to imperial card, and so down to *carte de visite* size, and then the smallest locket. And we are expected to vary the size—a locket for one sitter, and a life-size for the next—by merely turning the same crank. Could we give our time and attention to fewer branches, we should all probably succeed better in those branches. Certain it is, none of us succeed in all.

I have thrown out these hints, hoping that they may be of benefit to some; but above all things, let every man amongst us aim high, study diligently, work carefully, and you will succeed.

As I said last year at Cleveland, photography has a great future; do nothing to degrade it, but everything to ennoble and elevate it.

During the delivery, the applause was frequent, and at its conclusion the cheers were loud and long-continued.

Mr. Bogardus said that the demonstration was very gratifying, but time was precious.

Mr. Baker, of Buffalo, read a paper on the subject of photography, accompanying it with illustrations on the blackboard.*

Mr. Johnson, of Cleveland, was called upon to make a few remarks, and spoke as follows:

GENTLEMEN OF THE CONVENTION: I am requested to say a few words in regard to my practical operations in photography.

In the first place, I wish you to distinctly understand that portraiture is out of my line of business at the present time. I wish to say there is not enough attention paid to landscape photography; that is the department which I represent. There is a similarity in the manipulation of the chemicals in the view business to the portrait. We have a powerful light to work by in outdoor photography, which you have not indoors.

Second. We are obliged to be more careful in handling our chemicals than you are under a skylight; the effect produced upon the plate is more rapid and intense. Without taking up any more of your time on this, I will at once proceed to my method of operating, as I understand that is what I am desired to speak of.

The articles I use in my work are precisely the same as you use inside, with some modifications. The nitrate bath—the first great agent we use—is prepared by me in this manner: Knowing that I have pure nitrate of silver, I select the purest water that I can find—spring water I prefer to the article we get called distilled water, which, in my opinion, in nine cases out of ten is nothing but filtered rain water. I make my bath by dissolving my silver in small quantities. I take a pound of silver, dissolve it in a pint of water, to which I add a few grains of iodide of potassium, or all the potassium the solution would take up,

afterwards adding a little water, sufficient to bring my bath up to a forty-grain solution. In reducing, you will find precipitated the iodide of silver, which will readily filter out, then you have a saturated solution of iodo-nitrate of silver; this formula I have used ten or fifteen years.

My collodion is made the same as most of you make it. In the summer-time I use, in making my plain collodion, an excess of alcohol in preference to an excess of ether. I use more alcohol in summer-time than in the winter. I make my collodion as thick as it will flow, with the best cotton I can get in the market. There are good articles in the market, good enough to make any pictures with. I then have my collodion ready for my bath.

For my developer, I use a number of different ingredients, but still fall back on the sulphuret of iron with water, which I make about forty grains to the ounce of water. I find it does not so much matter what you use for a developer, if it is only in harmony with the bath. We want harmony of the ingredients used for the purpose of producing this effect.

It is necessary to observe closely in order to get the right proportions. I am using the same articles now that were used in the early days of photography, and I see no good reasons for changing them.

A few words further on the subject of outdoor photography. I agree with the President, and with the Committee on the Progress of Photography, that there is too little attention paid to outdoor photography, in making landscape and stereoscopic views, and I am sorry to see there is so little display of such views at the present time in the Exhibition. It is a department by itself, and in practicing it you are free from all those trials and cares and little annoyances that come up in the room where you have to pander to the whims and ridiculous ideas brought before you by your customers. It is not necessary for me to take up the time any further in regard to this. I have nothing particular to offer you, except to say, use simple ingredients and careful judgment.

* This paper Mr. Baker requests us to delay until our next issue, that he may have time to supply the necessary cuts.—Ed.

Mr. Fay.—Don't you think, Mr. John-

on, that pure clean ice is the best we can use for water.

Mr. Johnson.—It certainly is very pure, as a general thing. It depends on where you get your ice. Some ice may be as full of organic matter as water. In the country, where I live, I use pure sparkling spring water as it flows from the banks, which I find is the best.

President Bogardus.—There has been some dissatisfaction expressed because men who have been so thoughtful as to bring their wives have had to pay for their admission to the Exhibition. Now in the future this thing shall not be. I believe in the good old Bible doctrine, that man and wife are one. If you will bring your wives with you next time, one ticket will do for both.

Mr. A. K. P. Trask, of Philadelphia, chairman of the Committee on Apprenticeship, reported as follows:

MR. PRESIDENT: Your committee, appointed at your last Convention held in Cleveland, Ohio, to consider a plan for the better regulation of apprenticeship, and report the same at this Convention, have attended to their duties, and respectfully submit the following:

We believe that a regular system of studentship will greatly aid in the future development of photography, and recommend the Convention to give the subject its immediate attention.

We believe that bound apprenticeship will be injurious to the future progress of our art, and respectfully submit to you the following reasons:

1st. Bound apprenticeship is very unpopular with all classes in our country, and parents, born and educated under our free institutions, will hesitate to sign away their children's liberty.

2d. Boys bound out for a term of years cannot take the same interest in their employer's business that they would if they knew that they were obliged to make their services valuable to retain their situations.

Therefore we recommend a system that will place, in part, the responsibility on the student, believing that it will encourage young men to do their duty, and thereby endeavor to make their services valuable.

1st. Three years should be the standard time for studentship, and all boys under seventeen years of age should serve until they are twenty years old, at the expiration of which time they shall be furnished with their diplomas of studentship.

These diplomas should be issued by this Associ-

ation, in blank form, and filled out by the employers, setting forth the number of years served, what branches he excels in, his age at date of diploma, and moral character while employed. This shall serve as his honorable discharge and his recommendation to any member of this Association.

2d. Any student leaving his employer before the expiration of his time, and obtaining his honorable discharge setting forth the reasons for his discharge, and giving his age at that date and qualifications as above stated, should be entitled to the privilege to make application to any member of this Association, and engage to serve the balance of his time and receive from him his diploma as above stated.

3d. Any student leaving his employer without his honorable discharge shall be considered dishonored, and unworthy of the confidence or employment of any member of this Association.

4th. All applicants should come well recommended, and first taken on trial, and if found acceptable, the parents or guardians should be furnished with the above rules, and informed of your intention to strictly adhere to them.

5th. Owing to the great difference in expense of living in different localities, we find it difficult to fix a price on student's labor, but recommend low wages the first year and to increase their pay as their services become valuable.

Before closing, we feel it our duty to call your attention to the importance of establishing a photographic academy for the better education of photographers, and the higher development of the photographic art. We believe such an institution is much needed, and if properly conducted will place our art in the high ranks it now merits. Much can be said in favor of this subject. However, it is not our wish to extend here our arguments, but to call your attention to its great importance, and ask of you a favorable consideration.

A. K. P. TRASK,
J. H. FITZGIBBON,
DANIEL H. BENDANN,
E. DECKER,
I. B. WEBSTER.

The report was accepted and adopted.

A discussion took place, and a reconsideration was ordered, when Mr. I. B. Webster, of St. Louis, moved to lay the matter over until 1872.

A motion to secure the services of a "re-toucher" to explain the method before the Convention was agreed to.

Mr. W. J. Baker, of Buffalo, moved a

reconsideration, because retouching was a science, and could not be taught. Lost.

President Bogardus.—It would be pleasant for the Association if Mr. Baker, of Buffalo, would instruct us on the subject of retouching.

Mr. Baker.—We have already had so many able articles in our journals, and we have had Mr. Ryder, of Cleveland, who is probably one of the best in this country, so fully explain his mode, that it is quite superfluous for me to attempt to offer anything new. I use the pencil and the pigment, and the union of the two make the third. It seems to me I have nothing to add to that.

Gentlemen, *you must read your journals more attentively*, and you will be better informed; at the same time if I can privately be of any use to you I will be very happy to aid you, but to publicly explain all the little details in the art of retouching is an impossibility.

Mr. Spencer, of Michigan.—I would like to ask Mr. Baker the best method of preparing the varnish upon the collodion film for the pencil.

Mr. Baker.—I have never practiced but one method; that is grinding the surface with the pumicestone. I did at one time prepare a soft varnish, the form of which was given by Grashoff, but it was so soft, and took so long for it to set, I laid it aside for a harder varnish.

President Bogardus.—Allow me to take one moment of your time on this very subject. I think a great many pictures are retouched too much. My theory of retouching is very simple: Remove the freckles and heavy lines and spots, and perhaps grade your lines a little, but do not retouch your picture until you work all the likeness out of it.

Some four years ago I was fortunate enough to buy of a sailor a little box of India ink that he had brought with him from China, and I find I am very fortunate in possessing it, because it is far superior to the ink sold at the art stores in this country. My retoucher uses not only that, but also Faber's softest pencil; but he never, with my consent, polishes, or grinds down, or rubs the surface of the plate. I think it

will rub away just so much of the likeness. Still, others will differ from me.

Mr. Southworth, of Boston.—Show me all the pictures that are retouched up stairs, and select the best one, and I will report: "Touched so as to diminish the regret a little that it was touched at all."

Mr. Ayres, of Detroit.—I think Mr. Baker's remarks are eminently proper for this reason: that this thing is just like painting. One paint may be used successfully by one man, and another by another. I remember some time ago of meeting a photographer—

President Bogardus.—Mr. Ayres is the author of the work "How to Paint Photographs." Most of you will probably know him now. [Applause.]

Mr. Ayres resumed.—I was just going to say I met a photographer who had a little cake of Prussian blue, and he says: "I have got the thing; I am going to retouch negatives"—just as if somebody had told him to use Prussian blue; that that would be sufficient, and all he had to do was to retouch his negatives with Prussian blue. Now one man will use indigo, another Prussian blue, and another the pencil, and so on with different things; but the whole thing clusters in this, that whatever will produce the requisite amount of casting in, or to produce gradation of shade, is just what we want. What will suit one man will not suit another, and consequently each man will have his own way of doing it.

Other people may not agree with me, and perhaps the expression which I used may not be thoroughly understood, but I do say that this matter of retouching is becoming the curse of our profession [applause], and I will give my reason for it. Here a man sits down to retouch a picture, and what does he make of it? he works on the flesh until all the appearance of flesh is gone. Now it is an improvement to a negative to take out the freckles, and discoloration, and skin spots, and reduce the severity of the wrinkles; that is one thing, but to work on the picture until you take out all the granulated effect of the skin, is another thing. It is one thing to make a picture finished, but it need not be excessively fine. Our pictures that we see nowadays are, in

general effect, like a wax figure, or billiard ball, or something very smooth; now, is that flesh? certainly not. I may sit down and work at a picture until it is just as smooth as glass; is that flesh? certainly not. I want to work that picture until it looks like flesh. Another thing: I have known a great many country photographers, if you will allow me to use that term in contradistinction to those who live in the city, who did, before this retouching came in vogue, make first-rate work, but since this device they all think themselves artists, and what is the result? why, without any knowledge of just the amount of force they should use, they go to work and take out all that looks like flesh, and these pictures look as though they were all spotted over with whitewash.

Another thing these same artists undertake to do with their own retouching what artists do with India ink. It is plain one runs a great risk in touching a negative at all, but if he does touch it he must know something about facial anatomy and something about light and shade. Suppose you have a three-quarter face, and the light is full on one side, then your man commences to retouch the negative, and retouches until it is as flat as chalk. What ought it to be? There ought to come a white line to show the nose stands out, there ought to be a shade running along the edge of the nose, there ought to be a delicate shade to show where the temple is, but the picture they produce looks like a full moon [applause], and that is what I mean when I say this matter of retouching has become a curse to the profession. There are too many trying to become artists when they are simply photographers; they attempt things on negatives which they never dared to attempt on paper, whereas they ought to proceed more carefully on a negative than on paper. Then they undertake to put the light on the eye; I have seen lights on little ears de visites big enough for eight or ten inch heads; then they think they give expression to the eye by running over the white of the eye, and what do they make of it? Dead white with no rotundity at all. I warn my professional brethren against this; I think if they will undertake to make real good

pictures in the first place they won't need quite so much retouching.

It is far better to have a good negative than to have a poor negative, and hope to fix it by retouching it.

Mr. Fennemore.—My artist simply grinds the surface a little, and touches with the pencil and India ink.

Mr. Baker.—Our President made use of an expression that I do not understand. He spoke about grinding away the likeness; I do not see how that can be done; there is a perceptible thickness in the film of the varnish, and the grinding the varnish down a little does not touch the face.

President Bogardus.—Some grind down the varnish so as to get the retouching substance to take hold and then they retouch too much; I know they cannot touch the negative, that is impossible.

Mr. Bigelow, being called upon, said:

MR. PRESIDENT AND GENTLEMEN: I have but few words to say. It is scarcely necessary for me to take the time. *Mr. Ayres*, I think, has so fully covered the ground, any further words would be superfluous.

My experience has been, in photography, very limited. I work in water colors, though my experience there gives me some idea of photography. I heartily indorse everything *Mr. Ayres* has said. I am an advocate of retouching, particularly in copying—removing the scratches, which can easily be done by retouching.

Retouching scientifically improves a picture. I prefer to use the gum negative; the solution of gum, without bichloride. I prefer to use *Faber's* drawing pencils, and retouch on a gum surface, then it can be varnished afterwards. A small pointed, fine stick can be used to good advantage, where we have those "lightning streaks" on the background.

Mr. Samuel Holmes, of New York, tendered his resignation as Vice-President, in order to give place to some practical photographer.

Upon this *Mr. Loomis* spoke as follows:

I didn't intend to say anything upon this subject, but I, perhaps, may be the mouth-piece of some of us; what I say, however, I say upon my own responsibility. I regret very much that that letter of resignation was sent in; I regret still more there may have existed a cause for that resignation. I am

aware of the first organization of this Association. Mr. President, you will remember the three persons who met in your gallery, in the city of New York, and originated the call of the meeting at Cooper Institute, New York—yourself, Mr. Bendann, of Baltimore, and myself. That call was sent to the photographers of the United States, asking them to come in counsel at New York, in the Cooper Institute, and that call was generously responded to. We had several weights upon our shoulders. We had overtaxation by Congress, we had the Bromide Patent, and everything growing upon us. I am not going to say anything about the justice or injustice of what was coming, but there was evidently an avalanche coming. I took it upon me, voluntarily, to visit four cities—Boston, New York, Philadelphia, and Baltimore—to see what could be done in relation to raising funds, for the purpose, more particularly, of defeating matters in Congress with reference to the stamp act. I called upon the photographers personally; they all bid me God-speed, but said they were pushed; they all said, "Let us have a convention," but they could attend or not. They all said, "Let us defeat these things—let us go to Congress and see if we can't get redress," but they hadn't got any means. I went to five or six stockdealer firms—to Mr. Holmes, to Messrs. Wilson & Hood, Messrs. Anthony & Co., Messrs. Dodge, Collier & Perkins, and what did they do? Why they generously run their hands into their pockets, and took out the money, and said, "Let these things be done." Now, Mr. President, we are indebted to these gentlemen for the starting-point of this Association. I mean, they are the first men who gave means to work. I hope they can afford it. If they did it for business, they deserve credit for that; if by giving us means they helped themselves, *they did right*. [Applause.]

Probably many of us have heard mutterings, half undertones, about this man and that man and the other man, and whether or no we were to have a photographic association here in the interest of photography or the dealers, and whether there should not be a line drawn between the dealer and the photographer. I have nothing to say, in particular, upon this subject; but I must confess that whenever I attend these conventions I am glad to find the stockdealers present. [Applause.] I am glad to see their product there. They are men whom we often go to with our ideas; we have not got many to carry, however. [Laughter.] If it is right for them to occupy one end of the hall, that may be so. I confess if I was coming to the Convention, I had rather be taxed ten dollars for them to have

their goods on exhibition than for them not to come.

Some may think this is from a dealer. Those who feel that way have got the poison, let that poison come out. Let us have open, yet conciliatory expression. We have been told by our counsel, Mr. Bell, to be conciliatory. We have had that from our worthy President. Let us have it! We ought to have it; we never can succeed without it! Now, our friend, Mr. Holmes, of New York, has sent in his resignation, and says, at the same time, his interest is unabated, and wishes to retire to give practical photographers a chance. All honor to him for his generosity; and if others felt the same thing, with the same good feeling, perhaps it might be better. I do hope if there are any parties here who have got anything of that kind, and are holding it back, that they will present it. I propose very soon to introduce a notice of some change in the constitution to come up at our next meeting, and then, if there are any officers that it is desired to reject, it can be done by ballot. I propose to have the glorious ballot introduced. I know they are all hard-working men in the matter; they may have made mistakes. You would make mistakes if you were in the same position. [Applause.]

A vote was taken, and Mr. Holmes's resignation was very warmly rejected.

Mr. Holmes returned his thanks for the courtesies shown him in a very feeling speech, but would have preferred to be relieved. He said:

I think it is hardly worth while that so much of your valuable time should be taken up by anything that would seem personal. I supposed you would quietly receive my resignation and put in some practical photographer. I felt when I was first informed of my election, done without my knowledge or consent, that it was improper that I, not a practical photographer, should occupy that position. I do feel interested in this art, and everything that relates to it, something beyond dollars and cents, I trust; and I trust I can rise above all the petty jealousies and meannesses which may come up, and that I can shake hands with you, and do everything I can to advance the art in every way I can.

My life, from a boy, has been connected with it, and I believe I have been working with it as much as any of you have, though I never took a picture and never expect to, because I never dared to, fearing if I took a picture, I could not do anything else.

I thank you very kindly for this manifestation of your regard. I would very much prefer that you had followed my suggestion, but inasmuch as you seem to express a desire otherwise, let the matter remain as it is, and count upon me, wherever I am, and under all circumstances, as a friend for anything that shall advance this glorious art. [Applause.]

Adjourned until 3 o'clock P.M.

AFTERNOON SESSION.

The Convention reassembled at three o'clock P.M., President Bogardus in the chair.

The report of the Committee on location for the next meeting presented a report through the chairman, Mr. Southworth, of Boston. He said that twelve of the thirteen had agreed upon the following resolution :

Resolved, That St. Louis, Missouri, be recommended as the place for holding the next annual meeting; that Mr. J. H. Fitzgibbon, of St. Louis, be nominated as the Local Secretary, and that the time be the 7th of May, 1872.

The report, on motion, was accepted. A minority report was presented by Mr. Hesler, of Chicago, who moved that the vote be taken by ballot on the location.

A number of members objected to the ballot, and favored the adoption of the report presented as the sense of the Convention.

Mr. Fay insisted upon action being taken upon the report of the committee.

The discussion was participated in by Messrs. Hesler of Chicago, Fitzgibbon of St. Louis, Webster of Louisville, and Southworth of Boston.

President Bogardus said the question was as to taking the vote by ballot, and unless the question of location was decided by an overwhelming vote he would call for a ballot himself.

Mr. Hesler's motion to take the vote by ballot was not agreed to.

The resolutions were read, when Mr. Ryder, of Cleveland, objected to the date. It should be a month later, in which view Mr. Fennemore, of Philadelphia, coincided.

The resolution was divided, and the vote taken upon St. Louis as the place.

The vote was by the raising of the hands,

and St. Louis was decided upon by 89 yeas to 44 nays.

Mr. Hesler moved to make it unanimous. Agreed to, amid great enthusiasm.

The nomination of Mr. Fitzgibbon as Local Secretary was unanimously agreed to, and the recipient of the honor returned thanks.

The resolution providing for May 7th as the time was taken up.

Mr. Marshall, of Ohio, moved to change it to the first Monday of June.

Mr. Fitzgibbon, of St. Louis, said May was the most beautiful season of the year in that section.

Mr. Fennemore, of Philadelphia, said it was not a question of the time, but of the expediency, because in May many photographers could not attend.

Mr. Sawyer, of Chicago, advocated a later, while Mr. Baker, of Buffalo, was in favor of an earlier date, from the fact that visitors would not come to the Exhibition in the warm months.

Mr. Hesler, of Chicago, raised the point of order that the constitution required the meeting to be held in June.

Mr. Baker called up his resolution, changing the time of meeting to the first week of May. It was agreed to, and the resolution was agreed to, which fixed the date on the 7th of May, 1872.

Mr. Bogardus, the President, made a personal explanation in regard to the assertion made, that he had "packed the Committee on Location." He said that no living mortal had said a word looking to the naming of any one man as a member thereof, and he had striven to have all sections represented, and he believed he had all of them recognized. [Applause.]

The Committee appointed to award the Scovill and Holmes medals for the greatest improvement in photography, and for the one next in importance, made during the year, would respectfully report as follows :

That they have examined with care the nine articles and processes offered in competition, and have awarded the gold medal to Mr. L. G. Bigelow for his "background and curtain," and the silver medal to Mr.

H. T. Anthony, of New York, for his process of using alum in the printing bath.

HENRY MORTON, *Chairman*.

J. C. BROWNE,

EDWARD L. WILSON,

Assisted by M. CAREY LEA.

H. J. NEWTON, and

CHARLES WAGER HULL.

Committee.

A communication was received from the members of the Executive Committee, as follows:

We believe it will better satisfy the members of the Association, and insure peace and harmony, if you will kindly accept our resignation as members of the Executive Committee. In asking this favor we assure you of our very best wishes, and promise to work earnestly with you in all matters pertaining to the interests of the Association.

V. M. WILCOX,

W. I. ADAMS,

W. H. RHODES,

A. HESLER,

J. CARBUTT.

A long discussion ensued as to its acceptance.

Mr. Southworth, of Boston, moved that the resignation be not accepted, and after a few remarks, hoping that no personal quarrels would come into the Association, he called the previous question.

The motion was unanimously agreed to, and the committee was continued amid loud and long-continued applause.

President Bogardus made an explanation in relation to the stories circulated that stockdealers ruled the Association, and stated that but three were on the committee. The trouble arose from the fact that at one meeting the three stockdealers were present, and only one photographer, but he believed that they had voted as conscientiously as if their hands had been dipped deep in the silver bath.

Mr. Wilcox explained the work of the committee, and said there had been murmurings against the stockdealers, and as he was in that line he thought that the resignation would be accepted. He was glad to receive the token of confidence evinced by the vote.

Mr. A. K. P. Trask, of Philadelphia, then gave an explanation of a skylight which had been erected in the meeting-room for the use of the Convention, showing the different plans for building a studio and the varied contrivances in the way of blinds, screens, and curtains for managing the light in the same.*

Mr. Clough, of Concord, New Hampshire, a photographer, who had spent the winter on the summit of Mount Washington, then gave a description of his experiences and the views taken. He gave a very interesting description of the velocity of the wind in the mountain, it being sometimes ninety-seven to one hundred miles per hour, and to give an idea of the force, it was asserted that a wind of forty miles per hour would demolish chimneys in Philadelphia, and blow down all the light buildings. Pictures were taken there by one operator lying down on his back and holding the camera, while another exposed the plates.

Mr. Chute, of Philadelphia, read a paper upon "Photographic Excellence," containing many suggestions in regard to the art, as follows:

PHOTOGRAPHIC EXCELLENCE.

BY R. J. CHUTE.

He who excels in his art, so as to carry it to the utmost height of perfection of which it is capable, may be said in some measure to go beyond it; his transcendent productions admit of no appellations.—*La Bruyere*.

Of all the grand display, the exquisitely beautiful and almost marvellous productions of this exhibition of photographic art, the immense strides of progress that it marks, and the great superiority of some work over others, who will dare to point to this or that man, and say he has reached the utmost height of perfection, and his productions fill the measure of transcendent excellence?

Or who, among all this list of earnest, ambitious men, will show us his work, and say he has attained perfection, that he has set up a standard of excellence, that others may strive to arrive at but can never excel?

None, I venture to say; the man that has attained that high position does not exhibit his

* For full description and cuts of this model, with Mr. Trask's remarks, see our next number. They are delayed by the engraver.—Ed.

work or attend exhibitions. We have come together here because we know there is still room for improvement; we bring together some of our best productions, and compare them, study them over and over, marking the fine qualities, and comparing with our own standard the measure of excellence our abilities to judge can decide upon. and if we note carefully we will find that he who excels the most is the least satisfied with what he has done. He sees beauties in the productions of others that to his eyes are wanting in his own. He grasps eagerly at every new ray of light, and goes home freighted with new ideas which he works into his practice during the next year, with a determination not to be outdone; and though he may be awarded the highest praise, and placed in the front rank of those that excel, yet he himself sees the bright goal still in the distance, and nerves himself anew for still greater effort.

This is the spirit that animates, in a greater or less degree, the members of the National Photographic Association, and which will lead on to the highest state of perfection the art of photography is capable of.

In view of this want of perfection which we all acknowledge, —to say nothing of some of the expected discoveries, such as catching the natural colors in all their beautiful tints, or printing exquisite photographs as simply, quickly, and as surely as business cards are printed in a press; —but taking our processes as we are working every day, and the best productions we see exhibited as the standard of excellence, would it not be well for us to look thoroughly for the causes that militate against perfect success so far as our processes will admit. We often hear men complain of having bad luck; they have bad luck with their negative bath, their printing bath, their paper, their toning, &c., but this luck is a bugbear I don't believe in; there is more in management than in luck any day. Shakspeare has aptly put the point when he says:

"Our remedies oft in ourselves do lie
Which we ascribe to Heaven; the fated sky
Gives us free scope; only doth backward pull
Our slow designs, when we ourselves are dull."

A great deal has been and is being said and written on the preparation and management of chemicals, manipulation, skylights, posing and lighting the sitter, and every subject, one would suppose, that photography was susceptible of, and the result of all this has been great improvement in photographic work generally. But there is one eminently practical point that I would submit for the consideration of the Convention, and trust that an interchange of knowledge and

experience among the members will prove of great benefit.

We all know the importance of harmony, or proper relations of one part of our process with another. There must be harmony between the collodion and the bath, between the sensitive plate and the developer, between the dark-room and the skylight, and not only between the different chemicals and the chemicals and the light, but harmony between those that manipulate as well. We carry it also into the printing department, and endeavor to maintain a proper relation between the printing bath and the paper, between the printing and toning; but the weak point to which I refer is *between the negative and the printing processes*. For two years past the fraternity has been keenly on the alert for everything relating to retouching the negative, lighting the sitter, construction of skylights, blinds, screens, curtains, backgrounds, &c., without end; and the first thing a novice in the art wants to know is, "What is the best kind of light? Which is the best for Rembrandts? How can I learn to retouch negatives? Is grit varnish best for retouching?" These points being all the rage, we have seen great progress made in those directions. The photographer is learning to control his light as he would control any of his manipulations in which he has become skilled, and we see it playing about the head of the sitter like flashes of sunshine, in shapes and forms almost fantastic, yet wonderfully beautiful. Under the retoucher's hand the old, wrinkled, and freckled have assumed youth and beauty; the head lines are softened, and the delicate tints of the face are made to blend so as to give a beautiful roundness to every feature, but in some cases it is carried so far as to give the picture the appearance of having been sand-papered, polished, and varnished over, looking more like a chiselling from marble than the fleshy lineaments of the human face. Of the efforts in retouching we see evidences every day, and I might say the crowning evidences of wonderful success are to be seen everywhere in this Exhibition.

But how many pictures do we see among us from time to time that seem well lighted, carefully retouched, and apparently from a fine negative, yet the print cold and flat.

We all know how much difference there *can* be in two prints from the same negative; and we all know the importance of making prints as good as the negative will make. This is *the* point I want the members of the Association to consider, and take counsel together for improvement. Want of harmony between the negative and the

printing processes is, at the present time, one of the most potent causes of failure.

The experienced practical photographer gives all his attention to the various operations of producing a first class negative. The printing is in the hands of employees, often inexperienced, or with little more than a mechanical knowledge of what they do, following a routine they have learned, and producing what was considered several years ago the thing to be desired—a black and white picture.

Again, a photographer may produce excellent negatives, but continues to cater to the tastes of some of his ignorant customers, because they complain that their face looks dirty where there is a shadow, or that they "hadn't on a brown coat," when they see a warm rich tone.

Now we may look through the Exhibition, and see the elegant work that is commanding praise and admiration from all sides, and study the printing and toning there as well as the quality of the negative, see the work that is admired by those of refined and cultivated tastes, and mark the men whose reputations are highest, and whose galleries are daily thronged, and who will care what Mr. Jedediah Jenkins may say about his dirty face or brown coat? They love their art too well and are too jealous of their good name to violate their sense of what is right; and if the good man don't like his pictures as they are made, he can go where they make them black and white.

These are the men we want to hear from on this question of producing from every negative the best print it is capable of making. We have formulas enough—our photographic books and journals are full of them, but they will not accomplish the results without skill and proper management in their use. I will simply remark, as my own conviction, that the greatest and most general abuse of the printing process, as well as of the negative, is silvering too little, *printing too much, toning too much, and fixing too much*, this last being the greatest bane of all; the result of all which is black and white, or weak flat-looking pictures.

The time has come when the work that has the most of art and beauty in it will excel, and it is not how many prints, or how many sheets of paper can a printer get off in a day, but how well is the work done.

The days of cheap work, I trust, are passing away, and the better classes of our people want that which is artistic and in every respect the best, and are willing to pay for it. And the photographer that endeavors to elevate the public taste by educating people up to a higher apprecia-

tion of what is meritorious and artistic will not lose his reward.

We have a good example in one of our enterprising artist photographers of Ohio; and I trust Mr. Thorp is here, at this Convention, to give his personal influence in helping others to put in practice the same good resolution.

His movement was deemed of sufficient importance to be made the subject of an article by H. P. Robinson, Esq., in the Year-Book of Photography for 1871, who calls it a "wonderful formula." It is addressed to the public, and commences as follows:

"ART NOTICE.

"I would respectfully inform the patrons and admirers of art that, as soon as present orders can be completed, no more cheap pictures will be undertaken. That in the future I shall make only *the highest grade of photographs*."

He then states the means he intends to employ to produce the best work that can be made, gives the prices he intends to charge, extends an invitation to those who have never had a good photograph to give him a sitting, and concludes with the following, which is decidedly to the point:

"But to those who want *cheap* pictures, or who want their pictures taken *white*, I can offer no inducements, as I will no longer cater to a taste so false and meretricious, nor degrade our beautiful art by producing pictures that are in direct violation of the rules and principles of art, and that shock the taste of every cultivated mind."

Mr. Robinson says: "Let photographers keep this sentence in their memories, and it will do them good."

And to the members of this Convention I would say, if you love your art, if you love excellence in the work you do, if you love fame and honor, and competence, and a satisfying conscience, "Go thou and do likewise."

Mr. Vansyckle, of Philadelphia, moved that the Executive Committee be authorized to design a badge to be worn by members of the Association at their annual meetings. Agreed to.

Mr. Hesler, of Chicago, said a great deal had been said about skylights and cameras, and that a great deal of money was spent for cameras that would work quick, but the way to get a good picture was to have a pure white light, and something that would keep out the rain; pure white French crystal glass will save a photographer a great deal of time and money.

After a short discussion on the management of the sky-light, illustrated by the excellent model in the room, the Convention adjourned until Saturday morning at 10 o'clock.

SATURDAY, 10 O'CLOCK A.M.

Morning Session.

The Convention met pursuant to adjournment.

Mr. M. A. Root introduced some relics of photography, to wit:

A daguerreotype made by John Johnson, of Philadelphia in 1841, and polished by Samuel Van Loan.

A portrait of Johnson and Van Loan, taken in London on the roof of a building.

A picture made by Bayer, the first one who made a daguerreotype in London, and who bought the process of Mr. Daguerre.

A portrait of John A. Whipple, made by artificial light in Boston in 1844.

A portrait of Edward Everett and P. T. Barnum, at the age of 25, made twenty years ago.

A portrait of Mr. Cushman, Dubaine the composer, Dr. Dunglison, the late Judge Conrad, ex-mayor of Philadelphia, A. Balmer, Seguin and wife, and others.

The Secretary read a communication from James R. Barclay, inviting the members of the National Photographic Association to visit the House of Refuge and the Institution for the Deaf and Dumb. The invitation was accepted, and a vote of thanks given to Mr. Barclay.

PHOTOGRAPHIC INSURANCE.

Upon this subject Mr. Elrod, of Louisville, said:

I would like to denounce what seemed to be a fraud in the matter of fire insurance. If any of you have ever had the misfortune to move your gallery, and when you have found a house for rent, on applying to the landlord to rent the house the objection was made to your business on account of its being extra hazardous, in many instances you must pay the increase of insurance on the house, and in some cases, photographers are expected to pay the increase of rates on \$50,000 or \$100,000 worth of goods, or not be able to procure an eligible location. This is surely a fraud on the business, or a very serious mistake in agents of insurance companies. We have had in Louisville, in the past ten or twelve years,

from twenty to fifty galleries, and from the beginning up to the present time, we have had two or three galleries burnt down. Is there any other profession or business that has occupied as many houses that had as few fires in the same length of time? Now, gentlemen, when you go home agitate this question freely amongst photographers and insurance agents. Bring the agents into your galleries. Let them see that there is no more danger of your galleries burning than there is of their offices burning. Let us consider this question closely from now until we meet in St. Louis next May. Let us present this matter fairly and squarely to all the different insurance companies throughout the United States, and if they will not do us justice, let us form an insurance company, the name of which will be the Photographers' National Mutual Insurance Company. Then, gentlemen, we can let all other companies slide. I can recollect when some of the companies advertised their capital stock at from \$200,000 to \$300,000, and now boast of from \$15,000,000 to \$25,000,000, and will still say that their rates are very low, and that 1½ to 2 per cent. is as low as they can take risks on galleries. Gentlemen, when we meet in St. Louis next year, I trust you will all come ready and willing to take stock in the Photographers' Insurance Company. We can insure our landlords' houses, when other companies make us and our business the pretext for raising the rates of insurance, and thereby put a stop to this fraud, and then all respectable photographers will be able to procure good houses in good locations at fair rates of rent. I hope the President of this Association will appoint a committee of three to report on this subject at our next meeting.

Mr. Trask, of Philadelphia.—I think this is a very important subject. I guess we are coming right to the point now. In Philadelphia, during the last twenty years, we have had two fires in small galleries; those two fires, I am told, raised our insurance a cent and a half. They say we have combustibles, and our chemicals are liable to explode. I would like to have this settled right here. Is there anything in a photographic gallery that will explode? I don't believe there is anything in my gallery that will ignite unless you touch a match to it.

Mr. Fitzgibbons, of St. Louis.—In St. Louis they charge us two per cent., and I would like to know if there is anything more explosive in our business than is used

in every family. There are more fires resulting from the use of the gasoline lamp than anything that is used in a photographic gallery.

President Bogardus.—A few years ago at my gallery down town, I wanted to get an adjoining building over a store where there was a stock of rich mantillas and other goods, worth perhaps over a hundred thousand dollars. The person owning that stock leased me the upper floor at \$400 a year; he came to me in a few days and said his extra insurance on his stock was over \$800 for letting me in. As soon as the term of my lease had expired, I paid \$2500 instead of \$400, because of the extra insurance on the building. It strikes me it will be a grand arrangement to form a Photographic Mutual Insurance Company. I would suggest the appointment of a committee of three to examine into this matter, and report next year at St. Louis.

Mr. Baker.—I move the chair appoint a committee of three to investigate this matter, and that they be empowered to memorialize the different insurance companies and see if they cannot be induced to reduce our rates of insurance, and report at our next meeting. Adopted.

The President appointed as members constituting that committee: J. C. Elrod, Louisville; W. L. Troxell, Brooklyn; Mr. Perkins, Baltimore.

Mr. Bell.—Mr. President and Gentlemen of the Convention: You are meeting on a day that will ever be remembered in the history of the world. All intelligent minds and warm hearts are turned towards the great empire State of New York. This afternoon assembled thousands, both men and women, will gather to dedicate the monument erected to the life-work and distinguished services of Prof. S. F. B. Morse.

One of your members suggested to us early in the Convention, that this Association through its officers, join in the celebration of this most marked event, by sending a telegraphic dispatch to Professor Morse, and therefore, I propose, gentlemen, that the Secretary be directed to send to that vast audience there assembled, so that Professor Morse may know that we, as a body,

are interested in the cause of science, and are in deep sympathy with his life-work, the following telegram:

PHILADELPHIA, June 10, 1871.

TO EDWARD ANTHONY,
591 Broadway, New York.

Forward to proper parties the following resolution, first passed and followed by three hearty cheers: "The National Photographic Association of America, now assembled at Philadelphia, June 10, 1871, 10 A.M., join with united and hearty accord in honoring New York's favorite son and the world's great benefactor, Professor S. F. B. Morse; famous in art, distinguished in photography, and immortalized in the Telegraph."

A. BOGARDUS,
President.

EDWARD L. WILSON,
Secretary.

Mr. Southworth, of Boston.—In rising, Mr. President, to second this resolution, I am carried back to February, 1840, to a little low attic near the place where the post-office is to be erected in New York. Away up in the third or fourth story I saw a coil of wire, four miles long, coiled around a drum, and Professor Morse seated beside it studying upon his alphabet of dots and marks that he might get something that he could construe into words, that he might stretch out his wire and transmit them from one end of the world to the other; he had not finished his alphabet when I was there. Not more than two or three months previous, he was coming across the water from Europe, bringing with him a daguerreotype. About the same time, at his suggestion, a gentleman came with him bringing an apparatus to lecture upon in New York. Professor Morse knew of the daguerreotype before the King of France did, for he had been, by one of the scientific men of France, introduced to Daguerre before the King of France knew of his invention.

Professor Morse said to me: "As soon as the weather will permit I am going over into New Jersey to stretch out my wire, and see what it will do." I need not tell you anything about the result. If there is a man in this country to-day whom we ought to revere for every quality which can pertain to the human being, that man to-day is Samuel F. B. Morse.

The resolution was unanimously adopted by a rising vote.

On motion of Mr. Fitzgibbon, three cheers were given for Professor Morse and three for Mr. Anthony, who made the suggestion.

Mr. George Dabbs presented some stereographs made some twenty years ago by Mr. Richards, of Philadelphia, for which he received a vote of thanks.

Mr. Southworth, of Boston.—Last year I intended to introduce this idea: that after our business meeting each day we have a short lecture on the subject of the elements of photography for half an hour. I hope our Executive Committee will, within the coming year, so arrange it that we may have an ante-room for that purpose at our next meeting.

President Bogardus.—That is a very good suggestion, and our Executive Committee will endeavor to have that attended to.

Mr. Hawkins, of Alabama.—I move that the thanks of this Association be given to our worthy President, for the kindness he has exhibited while in the chair, and that he has the entire confidence of this Association.

Mr. Hawkins being the only Vice-President in the room was called to the chair, and put the motion, which was unanimously carried.

President Bogardus, resuming the chair, said: It is very gratifying to me to have conducted matters to your satisfaction. It is just as much out of my line to stand at the head of a parliamentary body as it is to cut marble, still we will do the best we can; and, gentlemen, you have my thanks for your assistance during the proceedings of this Convention. It is natural there should be some little difference in a large association, all engaged in an art in which there will be some little rivalry. Let us settle these difficulties amicably, and allow no disturbance to come in our Association. This Association is fixed on a permanent basis, and is going on, and I believe is better to-day than ever before.

On motion of Mr. Bell, a vote of thanks was tendered by the members of the Association to Mr. Wm. H. Rhoads, the Local Secretary, for his labors and unremitting

attention to the duties devolving upon that office, and to Mr. E. L. Wilson, the Permanent Secretary, for his constant efforts in the interests of this Association, and to Mr. Black, of Boston, for the part taken in the Exhibition, and to Professor Morton for his very able lecture on Light, and to the citizens of Philadelphia for the handsome manner in which the Association had been treated during the Exhibition.

Mr. Wilson, the Permanent Secretary, thanked the audience for its vote of thanks, and called upon Mr. Rhoads to make a few remarks.

Mr. Rhoads said: Gentlemen, I believe this is the second time in my life I have ever gotten up to address any large assembly. As I said to my friends in Cleveland I say to you, if you put the work on me I will do the best I can, and if this is part of the work I have to do I will try and say a few words.

There is one thing I can say to you, and that is, that the Committee of Arrangements, Mr. Wilson, and myself have been untiring in our efforts to make this a success; whether it will be a success remains to be seen when we have counted up the assets and liabilities, but there is one thing I am satisfied of,—it is a great mistake, in a pecuniary sense, to hold exhibitions of this kind in large cities. There is no effort that could have been put forth to make this a success that has not been put forth, and, gentlemen, if we have not been successful do not blame us. I thank you all kindly for the patient and indulgent manner in which you have treated me. There are some few of you I have not been able to give as much space as I would have been glad to. You know the size of the hall; it is not so large as the hall we had in Cleveland, and all could not be so well supplied. With these few remarks I bid you farewell.

Mr. Wilson, the Permanent Secretary, read a communication from Mr. Bigelow, thanking the committee for the honor they had conferred upon him in awarding him the gold medal, and promising to work more vigorously than ever hereafter for the interest and good of the trade.

Mr. Wilson, after reading this communication, said: I now have to say something

that gives me a great deal of pain. I have heard whispered, in reference to this matter of the Scovill and Holmes Medals, that this committee had been tampered with. I beg here to say that that is false. There is no committee that has been appointed during the year that has labored more zealously and conscientiously than this committee. They have approached no one, neither have they been approached; and if any gentleman will give vent to his discontented complaints publicly the committee will deny them publicly.

Mr. Southworth, of Boston.—There is one thing that we ought not to forget. We have in our Exhibition some of the work of the Lenox Glass Company, and if there is one thing that deserves, next to photography, the most honorable mention of this Association it is the Lenox Glass Company, and I would like to have a resolution incorporated in our proceedings to that effect.

Mr. Fitzgibbon.—I would state that the same company have offered through Mr. Mason to come out West, previous to the next Exhibition, put up this model skylight, have it all properly arranged in a suitable place, and it shall not cost the Association a cent. [Applause.]

Mr. Southworth.—My motion has become so perfectly weak that it has all fallen through. I should like, under the circumstances, to have the Secretary model this resolution in its proper form, so as to embrace it all, and publish it.

The Permanent Secretary, Mr. Wilson, was appointed a committee of one to act upon that matter.

The following resolution was offered.

Resolved, That at the next annual meeting of the National Photographic Association, we have pictures thrown upon the screen by the lantern, for criticism, and that members be requested to furnish as many transparencies for the occasion as possible.

Referred to the Executive Committee.

Mr. Baker, of Buffalo, called up Mr. Loomis's amendment, providing that the election of officers annually shall be by ballot. Adopted.

Mr. Wilson offered the following:

Resolved, That the services of the Lenox Glass Company in the production of the admirable quality of porcelain glass exhibited by them is recognized by this Association, and that thanks be extended to said Company for their gratuitous supply of plate-glass at this Exhibition, and for their generous offer to build a skylight for the benefit of this Association next year. Unanimously adopted.

Mr. Wilson gave notice that he should offer an amendment to the Constitution at the next meeting, striking out from Article IV of Section 1st of the Constitution, the words "with the exception of the Permanent Secretary." This to secure the election of the Permanent Secretary annually, the same as other officers.

The chair appointed as members of the Committee on the Relief Fund,—

Samuel Holmes, of New York.

Edward Anthony, " "

J. W. Black, of Boston.

As members of the Committee on the Scovill and Holmes Medals for the greatest Improvement in Photography,—

Mr. F. Gutekunst, of Philadelphia.

Mr. A. K. P. Trask, " "

Mr. A. Moore, " "

Mr. G. H. Fennemore, " "

Mr. S. Broadbent, " "

Mr. A. M. Collins, " "

Mr. Elrod, of Louisville.—I now move that we adjourn *sine die*, to meet in St. Louis the 7th of next May, 1872. Adopted.

President Bogardus.—Gentlemen, I feel we have had a good session. I feel we have talked photography more and better than we ever have done at any of our annual meetings. I have at each meeting endeavored to have one paper read, or some important matter brought up on the subject of photography. Gentlemen coming here from a distance, many of them have expressed themselves wonderfully pleased with the information they have gained upon these various subjects.

As to the usefulness of our institution, some men come here and say they have not been able to learn anything; most men say they have; but you will remember, gentlemen, you can pour water upon a live plant,

and it will make it grow; pour the same water on a dead plant and it will make it rot the quicker, and if any have failed to get any information, it has been their own fault. I saw one man in the streets yesterday who has been at my office over and over again, and we have tried to straighten him out on printing. His paper turns black in twenty minutes. And yet, the other day when we had our friends, Mr. Clemons and Mr. Fennemore, and others, telling us how to prepare paper, and illustrating it so that any man of ordinary capacity might have posted himself on that matter, he had gone off to the Fairmount Water Works, or the Lunatic Asylum, and didn't come here at all. How a man can expect to improve and not come in the Convention at all, I can't tell. I often think of the story I heard of two men on the coast of New England who had been drinking some; they got in their boats just at dark, and commenced to row, and pulled away for dear life all night: in the morning they found they hadn't gone a foot. They had forgotten to raise their anchor. [Applause.] They didn't work right. You all know in photography we have to work right, or we don't make any progress.

Gentlemen, I thank you again for your courtesy and attention, and kind assistance in every way, and if we live to see the 7th of May, 1872, I hope to meet every one of you, and just as many more, in St. Louis. Gentlemen, I bid you all good by. Adjourned.

BENJAMIN WEAVER,
Phonographic Secretary N. P. A.,
Cleveland, Ohio.

EDWARD L. WILSON,
Permanent Secretary, N. P. A.,
Philadelphia, Pa.

THE EXHIBITION.

A FULL list of the exhibitors and the record of the Exhibition will be published in the next number of this Magazine.

EDWARD L. WILSON,
Permanent Secretary.

PENNSYLVANIA PHOTOGRAPHIC ASSOCIATION.

A SPECIAL meeting of the Pennsylvania Photographic Association was held at the usual place on Monday evening, June 19th, 1871. Mr. Wm. H. Rhoads, President, in the chair. The roll was called, and twenty-five answered. The minutes of the last meeting were read and approved.

The President read a communication from Mr. C. C. Schoonmaker thanking the Association for their donation.

Messrs. Trask, Krips, and Shoemaker were appointed a committee to procure a room for the meetings of the Association.

It was announced that Mr. T. T. Sweeney, Cleveland, Ohio, had presented this Association with the beautiful landscapes exhibited by him in the late Exhibition. Photographs were also acknowledged as a present from Mr. F. Grasshoff, Berlin, Prussia, of the members of the Berlin Society.

Mr. Rhoads addressed the meeting on the subject of the late Exhibition. He said he could not make as favorable a report as to the financial success of the Exhibition as he would like to, but so far as the exhibition of photographs was concerned it was a perfect success, and we as Philadelphians should feel proud that we had been honored with such an Exhibition. He thanked the members of the Association who had aided him through the arduous duties of Local Secretary, as it was only by their assistance that he was able to keep up under the duties of his position.

Mr. Trask thought the Exhibition was a grand success as far as the character of the work was concerned, though he did not have time to enjoy it or give the attention to the visiting friends he would like, on account of being so busy with matters connected with the Exhibition.

The Secretary, Mr. R. J. Chute, read a paper on Negative Manipulation or Pin-holes, which was followed by a discussion on the same, and a vote of thanks to the author.*

After other routine business, the Association adjourned until September.

* Will be published in our next number.—Ed.

Photographic Printing in Colors on Textile Fabrics, Glass, &c.

BY H. H. SNELLING.

THIS process is based upon the carbon formula, and was first executed by me in August, 1857, the earliest attempt I believe ever made.

1st. Take as many negatives of the same view, or object, as you intend to use colors. These negatives must be well defined, sharp and as intense as it is possible to get them, otherwise the high lights will be somewhat clouded in the print.

2d. Place your muslin or other fabric upon a stretcher and draw it perfectly tight and even; as tight as it can be without tearing it. The best way, is to begin at one of the corners; then tack the corner diagonally opposite, next the third corner to the right of the second; then the remaining corner. Next tack one end, drawing the cloth so that the thread in it which rests upon the corners of that end covers the edge of the frame. Then tack the other end in the same manner. Next tack one side having the edge of the cloth perfectly straight with the stretcher, and not pulled over more than at the corners. Lastly fasten the remaining side, being careful to keep the selvage straight.

3d. Varnish the cloth with gum damar dissolved in benzine, to which add a little alcohol to prevent cracking. The proportions are not material, provided you do not get it too thick to work easily. I generally use it—two ounces of gum to eight ounces of solvent.

4th. Make a strong solution of bichromate of potash to keep in a stock-bottle.

5th. Procure as many small color cups or saucers as you wish to use colors, and the finest and best colors you can obtain, either in dry powder or in cakes. If you use dry colors, cups will be best; if the cakes, get saucers. You will also want a glass pestle if you use dry colors. In using the cake put sufficient for your purpose of the bichromate solution into a saucer, and rub the cake therein until the tint of the solution is two or three shades deeper than you desire to produce upon the cloth. In using the dry pigments, rub them up in the cup;

at first making only a paste with gum arabic water added drop by drop, and when this paste becomes perfectly smooth and free from particles, add the bichromate solution gradually to the proper consistency, observing the same rule as given for the cake color. In this way prepare the number of tints required.

6th. Suppose you have a landscape to print containing six colors—the sky, distant mountains, a stream, light and dark foliage, and, say a red rose tree in bloom in the immediate foreground—the sky and light part of water should be printed first. All parts of the negative for this except the sky must be obscured by pasting black paper on the collodion side, carefully observing the outline of the sky. All the other negatives must be treated in the same manner, permitting light to pass through the portions to be printed only. Select the tint necessary to represent the sky and the middle tint of the water, which are always the same, and lay it over the space to be occupied by the picture on the cloth with a broad camel's-hair brush, and let it dry. This, of course, should be done in the dark-room. Place the sky negative over it and expose to sunlight for about two minutes, then wash off the superfluous color in plenty of water, being careful that none of the unaffected color remains. When dry, lay on the tint for the distant mountains, and proceed as in the first instance. Then the light foliage and other parts of the same hue should follow. Thirdly, the dark foliage and deep shadows on the water, and in clouds, if there are any, and lastly, the red rose. Wherever the shadows are not brought out sufficiently strong, touching with the required color may be done with a brush. Judicious use of a little white in the high lights will also improve the picture.

It will be well, to prevent mistakes in printing, to number the negatives distinctly, commencing with the one to produce the lightest tint.

This process is peculiarly appropriate for window shades, and may be used on ground-glass for fan lights, lamp shades, &c.

My original intention was to keep this process a secret and use it myself, as soon as I was in a position to do so, in the manu-

facture of window shades, but having found occupation much more congenial to my taste and instruction, I now present it through your columns to the photographic public.

PHOTOGRAPHY IN GERMANY.

Bunsen's New Air Pump—How to Combine Lenses—An Optical Failure—Want of Cheap Lenses.

EVEN for the most objective observer it is difficult to cast aside his recollections. I feel this very much at the present moment. A year has passed since I placed my foot on American soil, and often, with a heart filled with gratitude, I recall to my mind the hearty welcome which was extended to me on all sides. I envy these humble lines because I cannot accompany them on their voyage to the New World, the more so as just now the programme of the Philadelphia Exhibition promises so much that is interesting and beautiful.

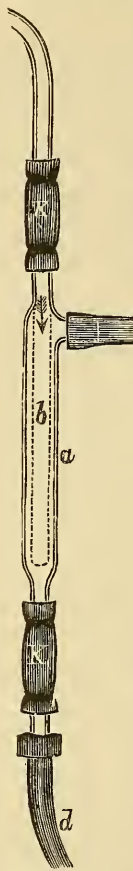
After a May of constantly cloudy weather, accompanied by almost incessant rains, we have now at last enjoyed a few days of beautiful weather, which were hailed with delight by the photographers and experimenters. We are here, however, not so particular about the weather as in America. I saw there galleries where, on cloudy or rainy days, the operator did not put in an appearance, and hence no work was done at all. This does not happen here; or, only in winter-time, when the day is unusually dark—darker than what perhaps is possible in sunny America, excepting Pittsburg, where, as I have been told, the photographer can, under the canopy of smoke, dispense with a dark-room altogether.

No dark-room? That is the device of a new apparatus, invented by Mr. Edwards, with which wet plates are prepared and developed in open daylight. The apparatus appears to promise a good deal. I omit a description, presuming that our friend Simpson has reported on it already.

An apparatus which perhaps before long may become useful for photography, has recently elicited a good deal of attention in our society; it is the so-called water air-pump of Bunsen.

This instrument answers the same purposes as an air-pump, but it does not de-

serve the name, for of a pump with its rods and valves and air chambers nothing is visible; the whole consists simply of a glass tube (*a*), in which another tube (*b*) is melted, and to the latter a smaller tube is attached. The upper end of *b* is connected with a water-pipe; the current of water enters *a*, passes off through the leaden pipe *d*, and by its mechanical force removes all the air from *a*. When *a*, by means of the smaller tube is connected with a flask, a bell-glass, or any other vessel, the latter will soon be exhausted of air, it being only necessary that the current of water acts under considerable pressure, and that the tube (*d*), which carries off the water, is not too short. Such an arrangement offers great advantages when it is necessary to filter and wash a precipitate rapidly. For this purpose the filtering funnel is



placed on the vacuum bottle, which has been connected with the tube (*f*), and the pump is started. The precipitates are exhausted with so much violence that very often the filter will tear, and it is therefore necessary to place a piece of platinum foil under the point of the filter. Spongy precipitates, like chloride of silver, are washed in a few hours; an operation which otherwise occupies days. Two or three gallons of silver bath may be filtered in a few minutes. The expense of the whole apparatus (*a, b*) is here, in Berlin, about fifty cents. Water-pipes are now introduced everywhere, and there is no obstacle to the general introduction of this useful apparatus.

It happens to me frequently that small

photographers ask me to point out to them a universal lens which would answer for all purposes, equally serviceable for portraiture, landscapes, architectural objects, &c.; if possible, such a lens is to be wide-angled and quick-acting.

That such a lens does not exist I hardly need to mention here. A good photographer will always need several lenses when he wants to do more than to make portraits; all that he can do is to accomplish with a few lenses as much as possible. A German photographer, in Petersburg, by the name of Clasen, does a great deal in this respect. He is often called upon to take architectural views; a work in which the demand for actinic power, form, angle of view, and flatness of the picture is very manifold. In order to satisfy all these, he unscrews the lenses from the different objectives and recombines them in pasteboard tubes in various manners. For instance, the front lens of a Steinheil with the back lens of a Voigtlander portrait, or the front lens of an Orthoscope with the back lens of a Hermagis portrait, &c., &c. He then constructs, on the spot, the combination which gives on the ground-glass the most suitable picture. It is evident that in spite of stops, many optical errors cannot be avoided, but it shows what may be done with a little common sense and a little optical knowledge, for the architectural views of Clasen rank amongst the best that I have seen.

In regard to optics, there remains in fact much to be desired, although often shortcomings are attributed to the lens which really belong to the operator. A short time ago I noticed an original case: One of my scholars took the picture of a building, and obtained two images instead of one; one picture was sharp and clearly defined, while the outlines of the other were indistinct. He repeated the experiment several times, always with the same result. Supposing the fault to be with the lens, he removed it and substituted another; the result remained the same. Finally he discovered that a small hole in the front board of the camera was the cause of all the trouble. A small hole will produce by itself an image on the ground-glass (pin-hole camera), and in this instance it acted like a second lens.

Another want is, at present, much felt in optical respects; I refer to cheap lenses. The largest part of the cheap lenses, as the conical lens, the ordinary stereo lens, &c., were made in Paris, and the reason why they could be manufactured there so cheaply is, that the optical glass was manufactured on the spot, and the enormous orders enabled the manufacturer to sell each separate lens at a very moderate profit, the large aggregate number making the income of the year considerable. To this must be added that in such wholesale manufactories much can be done by machinery which in smaller establishments has to be produced by manual labor.

Now, suddenly, this source of cheap lenses has ended. During the siege the want of cheap lenses made itself already felt, but nobody desired to undertake the manufacture, thinking that with the surrender of the city and returning peace trade would return to its accustomed channels. Next came the revolution, the tragical farce of the Commune. Commerce, industry, and trade fled from the city, and not content with the destruction of the prosperity of a city of two millions of inhabitants, the mad party spirit, in its death-struggle sacrificed on its altars the works of art of centuries, the pride of the world!

If from these ruins a new life will arise remains to be seen. Under these circumstances, the manufacture of articles which were formerly made in Paris receives a new impulse, and it is to be hoped that soon the necessities of our art will be supplied from a new source.

Truly yours, &c.,
H. VOGEL.

NOTES IN AND OUT OF THE STUDIO.

BY G. WHARTON SIMPSON, M.A., F.S.A.

Dr. Vogel's Handbook—Concentrated Iron Developers.

Dr. Vogel's Handbook.—I have just been examining the admirably complete Handbook of Photography, by our friend Dr. Vogel, which you have made accessible to the American public, or rather to all English readers, for I hope to see it attain a circulation in this country. It is, I have

no hesitation in saying, the most comprehensive manual which has ever been placed before photographers, and yet it is free from unnecessary bulk, or lengthy statements of simple facts. Whilst reading it I was reminded of an old parliamentary anecdote, which very aptly illustrates the especial characteristic of this work. It is stated that Sheridan on one occasion, whilst addressing the House, and quoting the "Decline and Fall of the Roman Empire," referred to the "luminous Gibbon." A friend subsequently asked him: "Why did you call Gibbon luminous?" "Did I say *luminous*?" replied Sheridan, "I meant *voluminous*!" Now, Dr. Vogel's book whilst full in every part is rather luminous than voluminous, and this is just the quality such a book should possess. Everything is explained by a man who knows for himself the things whereof he treats, and has moreover a firm grip upon them. Old Montaigne in one of his delightful essays says: "I would have every one write what he knows, and as much as he knows of it, not only on this, but on all other subjects." This is exactly what Dr. Vogel has done, and the issue is, that—if I may use another quotation without seeming irreverence—he speaks as one having authority and not as the scribes; meaning here by the scribes the mere compilers or transcribers of the experience of others, rather than the exponents or recorders of their own practice. I am probably writing nothing more than your readers know already, for I imagine that such a book would very rapidly find its way into the hands of all practical photographers; but I was so impressed with the book that I felt I must express my admiration of it as one of my "notes out of the studio."

Concentrated Iron Developers.—I referred recently to the developer used by Mr. Edwards as one permitting deliberation in the process of development. As the formulæ is one useful for general application, I may here mention it with advantage. Mr. Edwards prefers in the first place a concentrated or saturated solution which he keeps in stock ready for use. This consists of one pound of protosulphate of iron, one pound of ammonio-sulphate of iron, and one ounce

of sulphate of copper. Throw them together into a large jar, and add water (about 40 ounces) to form a saturated solution; after agitating until no more of the salts will dissolve, allow the mixture to settle, when it will be perfectly bright and clear, and of an apple-green color. This color it will retain for any length of time, together with all its properties, as when freshly mixed. I have kept it many months, and have never known it to become discolored, as is the case with a plain saturated solution of sulphate of iron.

When required for use take, by measure—

Iron Solution,	. . .	4 drachms.
Glacial Acetic Acid,	. . .	4 "
Alcohol, . . .	. . .	4 "
Water, . . .	. . .	8 ounces.

This will make a capital developer for summer use. For quick pictures, or winter work, the formula will be—

Iron Solution,	. . .	1 ounce.
Glacial Acetic Acid,	. . .	1 drachm.
Alcohol, . . .	. . .	4 drachms.
Water, . . .	. . .	8 ounces.

For instantaneous work a still stronger solution may be used with advantage; while for copying engravings, or where strong contrasts are desired, the first formula may be very much diluted.

It is a good plan to keep each of the above developers ready, and use them either alone or mixed in different proportions as required; by these means the developer may be adjusted in a moment to suit the subject or the exposure. If desired to intensify, which is seldom requisite, a little silver solution may be added to the iron developer; this can readily be done without forming a precipitate; or, if preferred, the plate may be flooded (without washing) with a fresh portion of iron developer without the addition of silver; in many cases where only a slight degree more vigor is wanted, this will be found the better plan.

Mr. Edwards keeps a bottle of the concentrated solution at hand, and a bottle containing the acetic acid, alcohol, and water at hand, ready for mixture in any desirable proportion to suit the subject and circumstances. In describing the action of the solution as just given, he adds: "I have hitherto been speaking of portraits, but this

form of iron developer will be found not less useful for all kinds of landscape work; there is no danger of fogging the plates, with far less than the usual difficulty in obtaining the right intensity in the negatives, which, at the same time, will possess great delicacy of detail, both in the shadows and high lights. For distant views and cloud effects this developer is invaluable, some of the most delicate effects of distance with clouds being often secured with a fully exposed foreground on the same plate.

I have found, during the four years in which I have had it in constant use, that this developer is all that is required for every kind of work with wet plates.

OUR PICTURE.

WE present our readers with a novelty this month from the studio of Messrs. Gihon & Thompson, No. 812 Arch Street, Philadelphia, and commend it for its many excellencies. The design of the outer tint of the medallion is by Mr. John L. Gihon, and under his personal care the pictures have been printed. The effect is very tasteful and beautiful. How it is produced we are not yet informed, and our readers with us can only surmise.

Such designs are only beautiful when they are unobtrusive. To make them flashy would be to make them objectionable.

As Mr. Gihon favors us with some excellent remarks in his paper on another page, he may further indulge us by disclosing his method of printing hereafter.

He uses the Salomon concave background, described a few months back by Mr. Simpson in his "*Notes*." His skylight has before been described by us,* and is the same as is in common use in Philadelphia. It is a north top-light, with east and west side-lights.

The prints were also made by Messrs. Gihon & Thompson, as we have said.

They are mounted on boards designed by Mr. Gihon specially for this picture, and manufactured for us by Messrs. A. M. Collins, Son & Co., Philadelphia. Mr. Gihon speaks in his paper of the importance of exercising more taste in mounting-boards,

and it is a matter which should have careful attention. The manufacturers above supply every stockdealer in the land, and there need now be no excuse for using tasteless and ugly mounts.

A Little Talk about Photography.

BY JOHN L. GIHON.

SOME time since I was kindly invited to contribute an article in relation to my views on the present practices of our profession. The assembling of the Association during the past week has brought me into personal contact with so many of my co-workers, that I have lost all hesitation in regard to the matter, and feel that in having some familiar chat with them I shall not expose myself to very severe censure, even though my ideas may somewhat conflict with their own. With our customers we have almost a stereotyped conversation. We comment upon the weather, the heat, or the cold, and then gradually but surely fall into a dissertation upon the wonders of our art—its rapid growth, and the gigantic strides that have been made in its improvement. Now, as a foundation for other remarks, I am about to be heretical enough to maintain that photography, literally speaking, has advanced but very little during the last twelve years. There are hundreds of men, daily working, who were at that time fully as able to make a negative as clean and as perfect in photographic qualities as those that they now produce. They use the same formulæ, and their manipulations are now similar in all respects to those of years ago. Before I further condemn myself, I must join with you in admiration of the modern productions, and admit their vast superiority. With the same chemicals, the same methods of working, and the same controlling hands and brain-power, we have results that are vastly different. The improvement consists in our having added to the inventory of our necessities a controlling medium—an *art element*. It is no longer our only desire to produce a photograph that will be faultless in its freedom from stains or blemishes, that will be sharp and perfect in detail, and that will most certainly be a likeness of that which is repre-

* See *Philadelphia Photographer*, June, 1868.

sented. We must now create pictures that can be hung side by side with the works of the painter, and that will not only show excellence in their execution, but also thought in their production. One after the other there are gradually springing from our midst masters, who are swelling the front ranks of our army, and whose efforts are receiving the admiration of the most cultivated tastes. Ask these men for their formula: with one accord they will assure you of their having no secrets—their processess are astonishingly alike—and are those publicly published, and probably used, though in a different way, by the most inferior workmen amongst us.

In this country, particularly, we have fallen into a great error. We have been endeavoring to establish *photograph factories*, and we have only too well succeeded in doing so. People come to our places generally in a hurry; to accommodate them we also use haste. The negative having been made, is given to the printer—almost invariably a man who has never seen the subject. The prints, when completed, are assorted with all due regard to the size of the photograph that has been paid for, and they are then mounted upon cards whose uniformity of design has but lately been infringed upon. The principle involved in all this is radically wrong. The same man that receives and poses his sitter should be the one to conduct all future operations. The position may be graceful, the expression desirable, the accessories well placed, the negative be perfect in its qualities, and yet the result may not be satisfactory to the artist if he stops here and intrusts all else to other hands, without supervision on his own part.

The next operation in order will be the retouching of the plate. It is difficult for the poser to convey to the mind of another exactly the effect he desires to be produced. Hence, the utmost efforts of the negative retoucher are usually confined to the smoothing of a face or hand. There is no branch of our art more abused. The skill and patience that is exhausted upon the production of a skin effect, unnaturally perfect, is no better directed than are the energies of the Chinamen who spend months of labor in carving upon a useless trinket.

In retouching negatives, too much labor is spent upon the face, and not enough upon the rest of the picture. Every mole, freckle, mark, or wrinkle is scrupulously removed, until expression and individuality are almost as equally destroyed. Practice and ingenuity will teach the retoucher how to lighten a shadow, to improve a middle tint, to crisp up a telling light, or to destroy the monotony of a flat background. Efforts in this direction are more to be commended than when they are confined alone to the perfection of heads, that when finished seem suitable for models to the manufacturer of waxen figure-heads for hair-dressers' display-windows.

I would also advocate more attention to our printing departments. Printers are popularly considered as holding second-class positions in our profession. An artistic printer is as desirable a man as an accomplished operator. With skill, and a thorough knowledge of the requirements of his business, he can correct many a fault that has occurred in the skylight or dark-room. This branch has been made entirely too mechanical. The man who can produce a good tone, and a smooth, brilliant print, has not, by any means, acquired all the knowledge that he is capable of making useful in his vocation. In the printing-room all temperaments, ages, and peculiarities are too often treated alike. Each negative is not sufficiently studied. The most meritorious workman is too generally supposed to be the one who can the soonest fill up a washing-tank.

I am truly glad to see that so much interest is now being taken in the tasteful mounting of photographs. Beautiful designs are constantly being adopted by leading houses, and the day seems to have approached when a stranger, looking over a collection, could dispel from his mind the idea that we all belong to some grand co-operative firm, having for its one grand motive *tasteless uniformity*. We cannot too highly estimate the advantages that the Association seems to have bestowed upon us. Independent of the fraternal feeling that friendly intercourse has produced, we have all unconsciously become great gainers, in point of knowledge, by having had

the opportunity of pleasantly criticizing each other's faults, and studying their merits. I can now but hope that our improvement may be constant, and that artistic excellence may be the goal for which we must strive, and that, to reach which, we must use our utmost endeavors.

812 ARCH ST., PHILA., June 12th, 1871.

ATTENTION PHOTOGRAPHERS!!

A NEW PROCESS FOR KEEPING PAPER WHITE,
WHILE PRINTING IN HOT WEATHER.

"I HAVE put the Printing Frame in the hot rays of the sun so that the Negative would get quite hot and it does not scald the paper, nor turns it yellow.

"I can print all day, no difference how hot the day may be and by evening I do my toning the paper yet in good condition, it also makes the paper more sensitive and prints in much less time than by the old way. Tones easy with less gold. I put it in the fume box and put on heavy fuming and it don't change the paper yellow; it is worth a considerable of money to any operator that has much printing to do, it also

keeps your silver bath clear and never turns red.

"My price for receipt \$15. If you wish to ascertain of my honesty and truthfulness I refer you to the following names."

Several copies of the above circular have been sent us by our subscribers, asking us to caution our readers against being imposed upon by it. We shall investigate and report. The party's address we withhold, as those who get his circulars will understand. We preserve the typography of the original.

Our Report of the Proceedings.

WE have endeavored to give as full a report as possible of the proceedings of the National Photographic Association meetings. We have gone to great expense to do this, giving almost a *double* number. Still what is in these pages is not all. The papers of Messrs Baker and Trask are yet to come; likewise other interesting matters in our next. Parties needing extra copies will please order early.

Editor's Table.

THE *Photographic World* for June 15th contains two more of the admirable cards of children by Mr. J. A. Scholten, St. Louis, and the following articles: Photography Abroad; Novel Application of Collodion; Poisonous Qualities of Chromate of Potash; Removal of Varnish Cracks; On Recovering Gold; The Purpose and Limits of Retouching; On Mounting and Viewing Stereoscopic Pictures; German Correspondence, by Dr. Vogel; Notes In and Out of the Studio, by Mr. Simpson; How? by David Duncan; Obituary—David Duncan; Wisdom from the West; Buckeye Correspondence; Boston Photographic Association; Ferrotypers' Association, Philadelphia; Ratzell's Combination Camera and Developing Box; "To My Patrons;" Dr. Vogel's Handbook; New Photographic Patents; Hypo Club; Splashes of Silver; Position and Composition; A Cheap and Useful Dipper; Photographs for Boys; The Last Act; Our Picture; Table Talk; All the World Over; Correspondence; Pennsylva-

nia Photographic Association; The Exhibition; Fixing and Intensifying of Negatives; Portraits and Pictures; Directions for Mounting; Intensity of Dark and Light Backgrounds; Wrinkles and Dodges; Editorial.

OWING to the amount of space required for the publication of the proceedings of the National Photographic Association, we have to defer the publication of several valuable articles in hand. However, we think our readers will be fully compensated in the valuable papers and discussions attendant upon the report alluded to. We consider them priceless.

WE print fifty-six pages this month, and yet haven't room enough.

MR. WELL. G. SINGHI, Waverly, N. Y., was burned out a few weeks ago, but is again "fixed" and at work.

In our next number we shall publish complete lists of the exhibitors at the Philadelphia Exhibition, which, together with other useful matters, are now crowded out.

H. H. SNELLING.—Our old-time photographers especially will be glad to know that their former co-worker, H. H. Snelling, Esq., has returned to his old love, and that we have engaged him as a regular monthly contributor to our pages. Mr. Snelling at one time published in New York the largest and finest Photographic Journal in the world, but photographers not being so numerous or so enterprising then as now, he failed to sustain it. From present intercourse with him, we believe he has lost none of his old vigor, and that he will be found an invaluable accession to our staff. His first paper appears in our present issue.

THE National Photographic Association *Record* is the title of a little daily published during the sessions of the National Photographic Association, and is full of very interesting, chatty, cheery matter. Among other things, it published the arrivals of all the members of the Association who were in attendance, and who recorded their names on the Association record. Five issues were printed, and the whole will be mailed on receipt of twenty-five cents.

"To My Patrons." This little "tract" is growing rapidly into favor, and many photographers, seeing its advantages, are adopting it in their business. It will save time and money. Try it. See advertisement. Parties wanting 500 only can have them for \$10 by leaving off the cover and appending their card to the last page of the book; or 500 complete for \$12.

THE National Photographic Association Group, taken by Mr. F. Gutekunst, No. 712 Arch St., Philadelphia, is sold by him mounted at one dollar, and unmounted at sixty cents; and Mr. Gutekunst agrees very generously to give twenty-five per cent. of this to the Relief Fund. We therefore hope they will be purchased very liberally.

VIENNA PHOTOGRAPHS.—The collection of photographs from Vienna, sent for the Exhibition, through our friend Dr. E. Horning, Editor of the *Photo. Correspondenz*, arrived unfortunately too late. We shall review them shortly.

MR. LYMAN G. BIGELOW returned to his home in Grand Rapids from the Philadelphia Exhibition, to find his factory and home destroyed by fire. This will delay the delivery of his new

curtains, but we are assured by him that they will be ready by July 20th.

SHOW MATS from the West, and of Western manufacture, were something we hardly expected to see at the Exhibition, and yet Messrs. W. H. Allen & Bro., Detroit, Mich., displayed some remarkably fine ones, which attracted a great deal of attention. We admire their enterprise.

BACKGROUNDS.—A gentleman worthy of notice, is Mr. L. W. Seavey, No. 684 Broadway, N. Y. The very "hitting" and suggestive curtain that adorned the Exhibition Hall in Philadelphia was painted by him, and a voluntary contribution. Mr. Seavey is always live, enterprising, and up with the times, and it will be advantageous to read his advertisements.

DR. VOGEL'S HANDBOOK continues to receive the most satisfactory testimonials, and we are glad to see the esteemed author so well received in his work. Mr. R. Benecke, of St. Louis, Mo., writes us concerning it: "Every leaf of it contains valuable information. It is not a book that you can look through in ten minutes. It takes time to digest it. With it in hand, and some brain in the cranium, any photographer is safe. For the benefit of the fraternity, I hope you will soon have to print a second edition."

MESSRS. CHARLES T. WHITE & Co., Milbur Wright, Jr., superintendent, send us a copy of their neat "monthly price list" of chemicals.

MESSRS. BAILEY & COHEN, Navasota, Texas, received at their late County Fair one medal each, gold, silver, and bronze; two diplomas, and a \$15 cash premium for their superior work. Very good. We are glad Texas appreciates photography.

RECEIVED.—Mr. J. H. Easton, Rochester, Minn., sends us some pictures which were shipped for the Exhibition, but detained on the way, a matter to be regretted, for we would like to see more work from the smaller places at the Annual Exhibition.

THANKS to Mr. C. H. Freeman, Montpelier, Vt., for some "maple-sugar" stereoscopic views; to Mr. Gay, Fall River, Mass., for very creditable cartes and Victorias; and to Messrs. Balch Brothers, 48 and 50 N. Charles St., Baltimore, for some very elegantly managed cabinet cards, full of feeling and excellence. These gentlemen should have exhibited in Philadelphia.



Boston Public Library.

THE LAST OF THE QUEUES.

J. LANDY,

CINCINNATI, O.



T H E

Philadelphia Photographer.

Vol. VIII.

AUGUST, 1871.

No. 92.

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NEGATIVE MANIPULATION.

PINHOLES.*

BY R. J. CHUTE.

MR. PRESIDENT AND GENTLEMEN: Having concluded to accept the duty of preparing a paper for this meeting, I determined to face the subject, and tell you something of what I know about pinholes. These are generally *very small* holes, but to a photographer they are the most perplexing ones he can get into. Wormholes, ratholes, knot-holes, or holes in the day, are nothing to be compared to them for annoyance. They come in such variety of forms, and such "questionable shape," that it is difficult sometimes to find the cause or apply a remedy. The causes may be summed up somewhat as follows: Unsettled or unfiltered collodion; dirt floating in the air from a collection of dust in the dark-room, or from some chemicals, such as hypo having crystallized, and being ground on the floor till it floats in the atmosphere, and coming in contact with the plate forms the worst kind of pinholes; from dust on the plates before they are coated; from a dirty bath; from an excess of iodide in the bath, caused by the bath being worked below its regular strength, one of the most common causes;

from the plate being drawn from the bath too slowly, causing the scum and particles of dust floating on the surface to be taken up on the plate; from a dirty plate-holder, stirring a dust when the slide is drawn, or when the holder receives an unusual jar; from dirty developer; sometimes from a dirty fixing bath, and often from letting too strong a stream of water run on the negative after fixing; and sometimes from a vulcanized rubber-bath, after it has been a long time in use. These are some of the more common causes, and of the twelve enumerated, eight of them are from actual dirt, which it is easy for every operator to dispense with.

The question is not how can we get rid of pinholes, but what is the cause of them? This question answered, and the remedy is apparent. But the operator is often puzzled to know the cause, especially if he is not particularly clean and careful in every motion he makes. I have a vivid recollection of my first pinholes from a weak bath. I used it along, day after day, dipping little plates that did not take much silver, till one day pinholes began to appear, and in looking for the cause I found my bath filled, as it were, with a frost-work of fine crystals. I discovered the cause and the remedy, and since then have considered it as necessary to feed a bath when it is worked, as it is to feed a horse.

* Read at the June Meeting of the Pennsylvania Photographic Association.

But the most perplexing cause of pinholes I ever had was from a rubber-bath. It took a good deal of speculating and experimenting to discover the cause. I would filter my bath, and for two or three plates it would work clean, then pinholes would come as bad as ever, till finally I filtered my bath into another vessel, and my trouble disappeared not to return.

I condemned my rubber bath-holder, thinking it worthless; but the difficulty can be easily overcome by rubbing the bath inside with paraffine till the roughened surface is filled. Or, it has been recommended to coat the inside of the bath with albumen. It will be observed, generally, that the rubber seems to be affected only at the surface of the solution, as we might say between air and water; the vulcanized rubber being acted upon alternately by the silver solution and the atmosphere, crumbles away, forming continually fine dusty particles that seem to float in the bath, and settle on every plate dipped, unless kept constantly in motion during the coating. The origin of this trouble being near the top of the bath, the remedy is easily applied. The dipper will be found to require the same treatment.

Most of the prominent causes of pinholes are easily discovered, and as easily disposed of, but some are produced so slightly, or are so minute, that they escape detection, while the photographer sees his negatives are deficient, but does not perceive the cause, the pinnies only being seen with a magnifying glass.

I have here three negatives showing pinholes each from a different cause. The first was developed with a dirty developer, and shows pinholes so minute that they can only be seen with a glass. Or, a large portion of the little spots to be observed are not really pinholes, but rather semi-transparent spots on the film, giving it a rough appearance. To the naked eye scarcely anything can be perceived, and herein lies the danger; the negative may lack that smooth, velvety appearance we find in a clean, perfect film, from this very cause, and yet it requires a minute examination to discover it. We cannot be too careful to have the developer filtered perfectly clean before using. On

the second negative the holes are very small, scarcely perceptible to the naked eye, and are mostly on one side of the plate. These were caused by drawing the plate slowly from the bath; the particles of dust and scum on the surface adhering to the plate. This manner of taking a plate from the bath has been recommended because it carries off all the surplus solution, requiring no after-draining of the plate. This method may answer if the bath be kept perfectly clean, but better draw the plate quickly, drain it well, and have it clean. The third and last negative would arouse an investigation with any operator, though the cause might not be readily discovered. It was made in the same bath as the others, one that had been well worked, but immediately before this plate was dipped the bath was well stirred; the plate was lowered gently into it and allowed to remain without motion until coated. The remedy for this of course is obvious; the bath needs filtering. Though a bath in this condition may be worked cleanly and successfully, by being careful not to stir it from the bottom.

In conclusion I would say, these little matters that many might think of too little importance to deserve attention, are just what we *must* look after if we would attain perfect success in our operations.

I am more and more convinced every day of the necessity for the utmost cleanliness, care, and skill in the manipulations of our negative process. Watchfulness is constantly necessary, and when we can discover nothing with our eyes wide open, we should put on our glasses and make sure that no enemy is lurking unseen. The little foxes are the ones we are to look out for the sharpest.

The man who attains the greatest success in any direction, gives his attention to the small matters of business equally with the large. The successful photographer will look after the cleaning of his glass with just as much interest as he will his finances.

“Little drops of water, little grains of sand,
Fill the mighty ocean, form the solid land.”

LEARN “How to Paint Photographs” in Water Colors and Oil, in Mr. Ayres’s 3d Edition. Ready shortly.

German Photographers' Society, New York.

THE general monthly meeting of this Society was held at their rooms, 28 Stanton Street, on Friday, July 7th. President W. Kurtz in the chair.

Minutes of last meeting were read and approved.

The following gentlemen were elected new members: H. Jannecke, Schroeder, H. Patburg, O. Bingenheimer, A. Bender, H. Oehern, Robert Benecke, J. A. Scholten, G. Cramer, St. Louis, Mo.; S. Fuld, Baltimore, Md.; H. Rocher, Chicago, Ill.; T. Schleier, Knoxville, Tenn.; G. Grelling, Detroit, Mich.; C. Wagner, Fredrick Ulrich, Theodore Gubelman, E. Uechtritz, O. Wagner, and H. Bengel, New York.

Mr. H. Schoene recommended for the printing of weak, thin negatives, to mix the varnish with some red aniline color, and to varnish the back of the negative with it.

Mr. E. Krueger thought he should prefer separate glasses with different colors, as it would be easier to control the printing.

The chairman was of the same opinion, the more so as aniline colors fade very rapidly in strong sunlight. As a curiosity he stated further, that a few years ago they used, in his establishment, to color the negatives in the fixing solution, by having a colored pigment mixed up with the hypo. They soon were obliged though to give it up again, because the collodion film got completely rotten, and showed millions of pinholes. For lack of time they could not experiment any further with it, and resorted to other means again.

Mr. Theo. Gubelman said he had printed his weak negatives lately with pretty good success under a cover of double tissue paper.

Objections were raised against this method on account of the impossibility in getting an even, uniform tissue paper. Mr. O. Wagner stated that for this reason he used tracing paper instead. For vignetting, he had found it the very best way, but the tracing paper had to be further away from the negative than the tissue paper.

It was finally resolved to appoint a committee, with instructions to make prints of the same negative with all the different ways

and methods known, and report at the next general meeting.

The Chairman appointed as committee, Messrs. H. Schoene, Kutscher, Nagel, E. Krueger, and J. Wolff.

Mr. H. Rocher, Chicago, had sent a lot of his own portraits, Victoria size, for his new-made friends of the Society. They were thankfully received and eagerly appropriated. He will send two very fine Rembrandt cabinets for the Society's collection.

On motion, it was resolved to make a photographic excursion to Fort Lee, New Jersey, on Friday, August 11th. All friends of this Society are kindly invited. Adjourned.

EDW. BOETTCHER,
Secretary.

PHOTOGRAPHIC DIALOGUES.

BY ELBERT ANDERSON.

Operator at Kurtz's Gallery, 872 Broadway, N.Y.

Marshall. Hullo! old boy; I'm right glad to see you; you have had a long jaunt in the country. They tell me you have been photographing three hundred young ladies of Vassar College, Poughkeepsie. How did you enjoy your sojourn among the mermaids?

Anderson. Why mermaids? Oh yes! I see—*Vassar Weibchen*. That's poor, Marshall. You are right, however; they were after all mere maids.

M. I call in to-day because it rains so hard; I knew you would not have anything to do.

A. On the contrary, I have something very special, and it may also interest you a little. Here is my Poughkeepsie bath, and I am going to put it in thorough order.

M. By Jove, that's just what I want to see done.

A. When I went to the college, I took with me a one gallon glass bathholder, and four gallons of bath solution. I averaged twenty to twenty-five negatives a day; at the close of the second day's work, the bath showed slight signs of mistiness, so the third day I filtered it, when at night it became weak, misty, and over-iodized. This I

decanted and set in the sun, and took a fresh gallon of solution, which being from the same lot, acted about the same as the first gallon I used. This then was put in the sun, and the third gallon put to use, and by the time I had used up the fourth gallon, I had worked about twelve or fourteen days, during which time I had dipped about three hundred plates. I commenced work at 9 A.M., and stopped *indoor* work at 3 P.M., then I took groups in the woods and on the lake until six. I availed myself of a rainy day, and took in the bath from the sun, and boiled the whole four gallons for about two hours. When cold, I reduced it to forty grains and filtered it without further treatment. The solution then lasted me until my return to town, say about two weeks more. It is now saturated with iodide, charged with ether and alcohol and organic matter, and reduced in strength; so I now propose showing you to-day how I shall entirely overhaul it, and make a bath better than new.

M. And that is just what I want to see and understand.

A. Nothing can be simpler. And as you have attended pretty faithfully to all I have heretofore said, you can no doubt tell me yourself how to proceed. Make the attempt any way, and I will correct you if you go astray.

M. Well, thanks; it's a go. I will review the present condition of the bath. Case 1st. It is over-iodized. Case 2d. It contains dust and foreign matter (*mechanical*) introduced with each plate, and through the agency of the atmosphere at such times when the bathholder was open. Case 3d. It is charged with ether and alcohol. Case 4th. It contains considerable albumen, obtained chiefly from the *back* of the albumenized plates, the albumen being drawn up by capillary attraction. Case 5th. It is reduced in strength; and last, though by no means least, Case 6th; it is charged with organic matter (*chemically*).

A. That is about the state the bath is in at present, and I want you to rectify all this for me. What's first to be done?

M. To remove half the iodide. I shall pour into the bath its equal volume of water. Eh?

A. Better still, pour the *bath* into its equal volume of water.

M. That's so. I remember something of this. Why is that the better plan?

A. Look. Into this bottle I pour eight ounces of bath solution, and into this other bottle I pour eight ounces of water. To the first bottle I add eight ounces of water. See the result.

M. It has thrown down a quantity of iodide, and turned of a *bluish* color.

A. Now upon shaking the mixture, a considerable portion of the iodide is redissolved, *on account of the stronger solution having been in excess during all the time of adding the water*. Into the other bottle I pour eight ounces of the bath solution; observe the effect.

M. Yes, I see. It appears to have thrown down a much greater quantity of iodide, as the solution has turned as white and creamy as milk.

A. And upon shaking the mixture it even becomes still more creamy, and *none* of the iodide is redissolved; for, in the latter case the *weaker* solution (water), was continually in excess, and the bath was so weakened at the outset that none of the precipitated iodide is redissolved.

M. Still, I should think that so long as the same amount of water was used in both cases, the result ought to be the same.

A. Your theory seems fair and reasonable. But alas! like many other theories advanced from time to time, it fails completely when put into practice—"ecce signum."

M. Well, let's get on; I am still a little shaky on this point.

A. Marshall, did you ever drink a gin cocktail?

M. Did I? Ask me once, and you won't long be kept in doubt.

A. Well I do ask you now. Not on account of the drink, but—

M. Come now, Anderson, that's too thin—

A. But, to show you another experiment which relates directly to what we have been just discussing. Come down stairs to the gin-mill. There—here's a tumbler, some sugar, gin, and water. See, I put the sugar in first, then the gin, which I stir a little,

and finally the water. So now stir away until you are tired; you will fail to dissolve the sugar. But dissolve the sugar *first* in the water, then add the gin, when you will have it all *hunkee doree*.

M. I'm blamed if that ain't so; well! here's looking at you.

A. In making your collodion, dissolve the bromide of potassium in a little water, and add it to your alcohol. Now, if you add the alcohol to the ether, the whole of your bromide will be precipitated, *but*, if you add the *ether* little by little to the alcohol, the bromide will be completely retained in the solution.

M. That's just what's the matter with Hannah. Let's go up-stairs again and attend to the bath. I add then the bath solution to its own volume of water, and shake thoroughly. Now half the iodide is precipitated; we next filter the solution, when the precipitated iodide remains behind on the filter, so that this cures Cases Nos. 1 and 2. Now I put the solution in this evaporating dish on the stove, and gradually turn on the heat; as the bath begins to evaporate, the ether and the alcohol being lighter, rise to the surface and are gradually expelled, which cures Case No. 3. Whilst this is taking place, the heat coagulates the albumen, which rising to the surface forms a metallic-like scum, and this cures Case No. 4. Now when it has evaporated down to its original volume, it has regained its original strength, which cures Case No. 5, and also, I presume, Case No. 6.

A. That's pretty good, Marshall, but unfortunately you have omitted the most important operation of all, since the worst part of the bath's disorder is from the organic matter (*chemical*) accumulated, and *this* you fail completely to remove by this means.

M. "Oh, ever thus, from childhood's hour,
I've seen my fondest hopes decay;
I knew I'd slip up sure as fate,—
Please tell me what the devil's to pay."

A. When the solution is placed on the fire, wait until it begins to evaporate; at that moment, and not before, introduce a piece of blue litmus-paper, which will gradually turn red on account of the acidity of the bath.

M. Would it not have turned red when the solution was cold?

A. Certainly, but when the bath is hot, it is in better condition for the next operation, which is as follows:

Make a weak solution of aqua ammonia and water (say one part ammonia to four or five parts water), and add this gradually drop by drop, stirring continually; a *brownish* precipitate (oxide of silver) forms at each addition, which, however, is redissolved upon stirring, because oxide of silver, though only very sparingly soluble in water, is readily soluble in water containing nitrate of ammonium, which salt is continually accumulating in the bath, being introduced by the ammonium salt contained in the collodion. Continue to add the ammonia until the litmus-paper is just restored to its blue color, when the bath will be either just neutral or rendered slightly alkaline.

M. What is the object of neutralizing the bath?

A. Because acids, as I have previously told you, exercise a retarding effect, not only upon the reduction of salts of silver by the developing agents, but also prevent the precipitation of organic matter by holding them in solution, especially nitric acid. On the contrary, alkaline liquids produce an opposite effect, and favor precipitation. The organic matter will now begin to fall down abundantly in the form of a black powder or sand, and will cling to the sides and bottom of the dish. The boiling may be continued any length of time beyond forty grains, and reduced to this strength when cold by the addition of pure water. After it has been brought to its proper strength, and is cold or warm, it may be filtered through several thickness of filtering paper, *after which*, it may be acidified with C. P. nitric acid.

M. Why *after* filtering?

A. Because the acidifying of the bath with nitric acid *before* filtering, allows the acid to dissolve a portion of the very organic matter you wish to remove; and of course, which would otherwise have been carried back again into the bath. It is not improbable that upon trying a plate in the bath so treated, the negative may flash out

suddenly, and be black and white, *i. e.*, very intense in the high lights, and devoid of details in the shadows; an addition of a little more acid will soon set matters right again.

M. Thank you, old fellow. I wish you would tell me how to make *collodio-chloride*, and print a porcelain picture.

A. Well, I will next time we meet; I must go now. Good bye.

The Sliding Plate-Holder Patent.

As our readers have already seen, the subject of this patent was discussed at the last convention of the National Photographic Association. Mr. Schoonmaker has repeatedly stated that this patent is "dead," and from his statements we had that impression ourselves. Mr. Southworth as emphatically states that the patent is *not dead*. They are both gentlemen of veracity, we believe, and we respect them both very highly. Both are human, however, and liable to err in judgment. What, then, are the facts? We answer to the best of our ability, and trust that there will be nothing farther said or desired through our columns until the question is decided, not by a divided, but by a full court.

It seems that the patentees (*or assignees*) sued Mr. Schoonmaker, for infringement. They were defeated, and carried the case to the Supreme Court. It happened that eight judges were holding the court, Chief Justice Chase being absent on account of sickness. Four judges decided for Mr. Schoonmaker, and four for Mr. Wing. Such a decision did not reverse or change the decision made by Judge Nelson, at Albany, for Mr. Schoonmaker. According to law, this gives Mr. Schoonmaker his case with costs of court. The patentees will, therefore, be obliged to commence new suits, and go over the regular course of proceedings to the Supreme Court at Washington again.

THE third edition of Mr. Ayres's "*How to Paint Photographs*," including *Oil*, will be ready in a few days.

THE EXHIBITION

OF THE

National Photographic Association at Philadelphia.

HAVING in the last number of our magazine, given our readers a pretty full record of the proceedings of the Convention at Philadelphia, it will be in place to say a few words concerning the very beautiful Exhibition, after which we follow with other matters pertaining to the meetings, and the papers of Messrs. Trask and Baker.

Let us say first that the average quality of the work exhibited was most encouraging and gratifying, showing that those who did well before are doing much better, and that those who were behind have caught up, and are doing splendidly.

Any careful observer who attended the former Exhibitions could not fail to see that more care, more skill, and more good taste was apparent in the portraiture particularly, and acknowledge also that the National Photographic Association is working an immense amount of good. The pictures were more carefully studied, too, by the photographers who were present. Here and there at any time could be seen groups of the earnest ones examining the works of art together, discussing their merits, and making notes of what they saw. This being the case, the Exhibition was a *success*.

It was held in Horticultural Hall, one of the finest halls in the country for such a display, though, as was feared, it was hardly large enough. The Local Secretary thought that by placing the uprights closer together than they were at Cleveland, he could get as many pictures, and more, in than there were at that place. He hardly expected such an overwhelming demand for space, however, as was soon made upon him, and after he had all his plans arranged he was compelled to alter them, in order to secure more hanging space. This was done at considerable sacrifice, for the beauty of the arrangement was annulled partly.

Great uprights were erected at each side, precisely the same as those at Cleveland, only longer and higher. Then, instead of devoting the centre of the hall to the tables

occupied by the dealers, the demand for hanging room made it necessary to run high uprights down the centre of the hall also. This spoiled the general view from the galleries, and entirely prevented our getting a picture at all fit to put in our magazine, a matter which we very much regret. But by referring to the picture of the Cleveland Exhibition a year ago, our readers may get a very fair idea of the appearance of the hall in Philadelphia.

The stage was devoted to the musicians, and for the audience to promenade and rest. Against the wall of the stage was suspended an immense screen, painted by Mr. L. W. Seavey, New York, and by him donated to the Association. The curtain was beautifully colored in Mr. Seavey's best style. We got one negative from it, from which we are having a cut made. We expected to have it accompany this, but our engraver failed to get it done in time.

The Committee of Arrangements was Mr. Albert Moore, J. Cremer, J. Carbutt, W. H. Rhoads, and E. L. Wilson. Their work was made easier by the voluntary help of the members of the Pennsylvania Photographic Association, who were there day and night, rendering all the assistance possible. Three days and three nights were occupied in unpacking the goods for exhibition, and in arranging them. The tables and cases of the dealers and manufacturers were at the ends and sides of the hall, and the Foyer was devoted to solar cameras and other such large apparatus.

The Exhibition was opened to the public on Tuesday evening, and the services of the orchestra began, who discoursed sweet music every evening of the week.

As the members of the Association arrived, they entered the Secretaries' office, where they were supplied with their tickets for the Exhibition, Lectures, &c., and the general arrangements were such as to avoid confusion or delay.

The Exhibition was open from 10 A.M. to 10 P.M., from June 7th to 13th, and was very fairly attended by the public. The weather was very warm, which was much against the financial success of the affair, and convinced many that June is too late

for the Exhibitions. It is, therefore, a source of congratulation that the next one will be a month earlier.

LIST OF EXHIBITORS.

Foreign.

DR. H. VOGEL, Berlin. Views in Egypt, Sicily, Italy, and of the 1870 eclipse.

WM. NOTMAN, Montreal. Large colored composition picture, Skating Carnival—interior of the Victoria Skating Rink—and large portraits in India ink.

ALEX. HENDERSON, Montreal. Landscapes of excellent quality.

JOS. ALBERT, Munich. Great variety of large and small Albertypes, per E. Bierstadt.

GEO. CROUGHTON, London. Photographs colored and from retouched negatives.

GEO. WASHINGTON WILSON, Aberdeen, Scotland. Panoramic landscape views, glass transparencies, and stereoscopic views.

ROBINSON & CHERRILL, Tunbridge Wells, England. Splendid composition pictures, marine views, and genre pictures.

NETTERVILLE BRIGGS, Leamington, England. A series of 8-10 Salomon style portraits, of fine quality.

J. HUBBARD, London, England. A composition picture entitled "Stolen Moments." Very beautiful.

A. DISSTON, London. Five compositions, entitled "The Smithy," "The Young Artist," "Broken Toe," "Waiting for Change," and "Peep Show."

WALTER WOODBURY, London. Woodbury prints and transparencies.

TAYLOR & WETHERBEE, St. Thomas. Interesting views and portraits.

W. W. LAW & SON, Brighton, England. View of Brighton Church, and the Tomb of Lawrence Washington, the grandfather of George Washington.

LOESCHER & PETSCH, Berlin. Stereoscopic "Gems of German Life;" large and small portraits.

MOSER, SR., Berlin. Stereo views of Germany, Harz Mountains, &c.

J. GRASSHOFF, Berlin. Portraits of various sizes, including a large number of the members of the Berlin Society for the Advancement of Photography, Dr. Vogel, and others whose names are familiar to us. Excellent work.

DR. SHULTZ-SELLACK, Berlin. Photographs of the Solar Spectrum, Newton's Rings, and

pictures on Iodide of Silver, &c.; a very interesting collection.

J. OBERNETTER, Munich. A large collection of Lichtdruck pictures—photo-lithographs—on various kinds of paper, of admirable and astonishing quality.

E. MILSTER, Berlin. Large portraits from exquisitely retouched negatives, and a large collection of admirable copies of celebrated oil paintings.

GUSTAV SCHAUER, Berlin. A splendid collection of copies from oil paintings, and fine landscape and architectural views.

K. SCHWIER, Berlin. Views of Strasbourg, scenes from the late battle-fields, &c.

CARL SUCK, Berlin. A fine collection of card, Victoria, and cabinet portraits, architectural views, &c.

OHM & GROSSMAN, Berlin. A very large and splendid collection of photo-lithographic prints; some very large, of excellent quality, of all classes of subjects, and on all varieties of paper.

ROMAIN TALBOT, Berlin. A series of fine views in Egypt.

F. CHRISTMAN, Berlin. A large collection of copies from oil paintings, engravings, &c., bound in volumes and unbound.

OTTAVIO BARRATI, Milan. Views of the Mount Ceniz Railroad, Suez Canal, in Egypt, &c.

M. OZIER, Jersey. Stereoscopic views made by moonlight.

Domestic.

WILLIAM H. RHODES, Philadelphia. A fine collection of plain and colored portraits, large and small.

W. M. WEIGHTMAN, Philadelphia. A colored solar print from the gold medal negative.

J. GURNEY & SON, New York. Collection of imperial cards.

W. R. HOWELL, New York. Ditto, and 8-10 portraits in India ink.

SCHREIBER & SON, Philadelphia. A fine collection of animal pictures from life, landscape and architectural views.

GEORGE B. AYRES, Detroit, Michigan. An exquisitely colored portrait of a lady.

L. G. BIGELOW, Grand Rapids, Michigan. Ditto of a lady and child.

WILLIAM KURTZ, New York. A variety of portraits, plain and colored, and solar prints in crayon.

W. F. SPIELER, Philadelphia. Photographs in oil and water colors.

J. LANDY, Cincinnati, Ohio. A grand collection of Rembrandt and other portraits, large and small.

BROADBENT & PHILLIPS, Philadelphia. Tinted

crayons, porcelains on cryolite glass, colored and plain.

J. A. SCHOLTEN, St. Louis. A fine lot of children's portraits, cards, 8 x 10, 11 x 14, and life-size crayons of great excellence.

ALBERT MOORE, Philadelphia. A large collection of solar prints from portrait and landscape negatives, by J. C. Browne, O. B. De Morat, A. Bogardus, David Pepper, W. H. Whitehead, and others.

MILTZ & SWART, Peoria, Illinois. Plain photographs.

WALMSLEY & Co., Philadelphia. Porcelains and plain work.

J. LEE KNIGHT, Topeka, Kansas. An interesting "pictorial monogram" of the State Legislature, views of "Droughty Kansas," &c.

GIHON & THOMPSON, Philadelphia. Very large photographs, colored, and an assortment of curious things from nature.

R. NEWELL & Co., Philadelphia. A great variety of photographs from nature, hardware, notions, &c.; a very curious collection.

A. K. P. TRASK, Philadelphia. Very large paintings in oil, plain and colored work, all sizes, ferrotypes and fine work from retouched negatives.

BENDANN BROTHERS, Baltimore, Md. Large pastel portraits, and a splendid collection of plain work of all sizes.

SUDDARDS & FENNEMORE, Philadelphia. A superb collection of burnt-in enamels, the only ones in the Exhibition.

JAMES CREMER, Philadelphia. A large array of porcelains on the new cryolite glass, and a splendid collection of stereoscopic views.

AMERICAN ARTISTS' ASSOCIATION, Philadelphia. A fine display of colored work of every variety and style.

WILSON, HOOD & Co., Philadelphia. An assortment of plain work, made with Ross Lenses.

J. W. BLACK, Boston. A collection of portraits from negatives made with his new acid bath.

J. F. RYDER, Cleveland, Ohio. A magnificent collection of 11 x 14 portraits, from carefully retouched negatives. Excellent work.

A. BOGARDUS, New York. A fine show of all classes of work, plain and colored.

D. H. ANDERSON, Richmond, Va. Various sizes of portraits of fine quality.

W. S. PENDLETON, Brooklyn, N. Y. A fine life-size crayon of E. Y. Bell, Esq.

A. H. STODDARD, Ansonia, Conn. Lot of cabinet pictures.

OSCAR KUNATH, New York. Exquisite porcelains colored in oil.

AMERICAN PHOTO-RELIEF PRINTING COMPANY, J. Carbutt, Superintendent. A fine display of Woodburytypes on glass and paper.

J. LÖFFLER, Tompkinsville, Staten Island. Plain portraits of various sizes.

CRAMER, GROSS & Co., St. Louis. A fine show of portraits.

J. W. HURN, Philadelphia. Plain and colored work.

H. NOSS, New Brighton, Pa. A fine display of stereoscopic views.

S. McMULLEN, Philadelphia. Fine architectural views.

A. H. HEMPLE, Philadelphia. Photographs of machinery.

H. ROCHER, Chicago. An admirable collection of Rembrandt effects and others, from retouched negatives, large and small.

VANSYCKLE & BURR, Philadelphia. Collection of portraits.

G. W. CHESTON, Philadelphia. An assortment of plain work.

S. W. SAWYER, Chicago. A display of card and other work.

G. TILGHMAN, Philadelphia. Pictures on glass by the sand blast process.

T. T. SWEENEY, Cleveland. Large and small landscape views of fine quality.

D. LATHROP, Philadelphia. A variety of excellent pictures.

E. J. FOSS, Boston. Portraits of various styles.

C. S. PHILLIPS & SON. A large assortment of all styles of solar camera printing of excellent quality.

Z. P. McMILLAN, Galesburg, Ills. A variety of plain work.

W. L. GERMON, Philadelphia. An assortment of plain and colored work.

F. A. WENDEROTH, Philadelphia. Carbon prints and porcelains.

R. KNECHT, Easton, Pa. A creditable display of portraits, &c.

F. GUTEKUNST, Philadelphia. A display of excellent plain work of all sizes from cartes to life size.

J. REID, Paterson, N. J. Views, machinery, architecture, &c.

S. T. SOUDER, Charleston, S. C. Porcelains and views.

W. M. CHASE, Baltimore, Md. A large display of stereoscopic views.

G. H. LOOMIS, Boston. A nice show of portraiture.

WILT BROS., Franklin, Pa. Views of oil wells, &c.

LOVEJOY & FOSTER, Chicago. A collection of stereoscopic views.

M. M. GRISWOLD, Lancaster, O. Some excellent stereoscopic gems of American life. Also larger sizes.

W. B. HOLMES, New York. A fine display of stereoscopic views.

J. H. BOSTWICK, Bristol, Pa. A good collection of portraits, of various sizes.

D. HINKLE, Germantown, Pa. A nice display of children's and other pictures.

A. KRACAW, Washington, Iowa. Portraits of various sizes.

F. THORP, Bucyrus, O. Large crayon portraits.

JONES & STIFF, Salem, Mass. A variety of fine portraits.

H. MERZ, New York. Some fine subject pictures of excellent quality.

SLEE BROS., Poughkeepsie, N. Y. Porcelains and plain photographs.

R. BENECKE, St. Louis, Mo. A collection of admirable views, made with the Zentmayer Lens.

JOHN F. NICE, Williamsport, Pa. Photographs, landscapes, &c.

WILMER & BASSETT, Erie, Pa. A variety of plain work.

M. CAREY LEA, Philadelphia. Views by the collodio-bromide process.

N. H. BUSEY, Baltimore, Md. A fine collection of portraits, various sizes.

KILBURN BROS., Littleton, N. H. A magnificent collection of views on Mt. Washington and other places, together with stereoscopic groups from life, of animals, birds, &c.

DINMORE & WILSON, Baltimore, Md. A fine display of portraits of various sizes.

C. A. ZIMMERMAN, St. Paul, Min. A fine collection of views, &c.

J. W. WILLIAMS, Philadelphia. Ivorytypes.

E. E. HENRY, Leavenworth, Kansas. A fine display of cabinet and other pictures.

JOHN A. TODD, Sacramento, Cal. Ditto.

CLOUGH & KIMBALL, Concord, N. H. Stereoscopic views of Mt. Washington in winter.

A. M. ALLEN, Pottsville, Pa. Variety of plain work.

FRANK ROWELL, Boston. Excellent work from negatives of varied size.

B. F. BATTLES, Akron, Ohio. Cabinet size and other work.

T. BROOKS, Philadelphia. Plain and colored work.

J. H. MORGENEIER, Sheboygan, Wisconsin. Plain and retouched negative work.

G. F. GATES, Watkins, New York. Fine stereoscopic views.

B. L. H. DABBS, Pittsburg, Pa. A fine display of large colored work.

E. & H. T. ANTHONY & Co., New York. A daguerreotype of Mr. E. Anthony made twenty years ago, and a porcelain made in 1871. The former is the best. Also colored pictures from negatives by Robinson & Cherrill, and views made with the Dallmyer Lens.

W. F. OSLER, Philadelphia. Some splendid portraits, plain and worked in India-ink colors and pastel.

F. L. STUBER, Bethlehem, Pa. A fine array of 8-10 and stereoscopic gems.

C. S. HASELTINE, Philadelphia. A fine display of Braun's carbon reproductions.

J. A. SHOAFF, Fort Wayne, Indiana. Large solar prints.

Manufacturers and Dealers.

A. D. WILES, Fremont, Ohio. Camera-stand.

T. J. TRAPP, Williamsport, Pa. Syphon.

H. BENEDICT, Put-in-Bay. Chronograph.

LENOX GLASS COMPANY, Lenox, Mass. Cryolite porcelain.

B. FRENCH & Co., Boston. Voigtlander Lenses.

L. G. BIGELOW, Grand Rapids, Mich. Background and curtain.

W. H. ALLEN & Bro., Detroit. Passepartouts and show mats.

GATCHELL & HYATT, Cincinnati. Chair.

J. GOOD, Lancaster, Pa. Frame vise.

S. WING, Boston. Multiplying Box.

J. L. WINNER. Plate and paper drier.

J. B. HEYL, Norwalk, Conn. Impermeable pans, view meter, &c.

CASTLE & SUTLIFF, Cleveland. Solar camera.

J. A. SHOAFF, Fort Wayne. Solar camera.

New York Exhibitors.

J. W. WILLARD & Co. Lenses, &c.

G. GENNET & Co. Paper.

L. W. SEAVEY. Backgrounds and accessories.

L. DUBERNET. Gilt frames, velvet passepartouts, &c.

W. H. MARDOCK & Co. Rose varnish, colloidion, &c.

C. T. USNER. Photographic lenses.

SCOVILL MANUFACTURING COMPANY. American Optical Company's apparatus, 1000 varieties of cases, Union goods, presses, chairs, photographic goods, &c., of their several manufactures.

E. & H. T. ANTHONY & Co. Albums, apparatus, elastic background, cameo press, chemicals, collodions, &c.

L. PATTERBERG & Bro. Fancy show mats, passepartouts, &c.

Philadelphia Exhibitors.

POWERS & WEIGHTMAN. Chemicals.

C. C. SCHLEUNES. Frames, &c.

ROSENGARTEN & SON. Chemicals.

WILSON, HOOD & Co. Apparatus, walnut frames, Ross lenses, chairs, accessories, &c., &c.

BENERMAN & WILSON. Photographie publications, &c., &c.

JANENTZKY & Co. Colors and brushes.

DR. W. H. PILE. Silver tests &c.

W. W. HARDING. Albums.

C. FASER. Gilt and other frames.

PHILLIPS & JACOBS. Chemicals.

CROSSCUP & WEST. N. P. A. Monograms.

L. J. MARCY. Sciopeticon.

E. C. RATZELL. Out-door apparatus.

H. ROETTGER. Lenses and solar cameras.

J. F. MAGEE & Co. Chemicals.

GEORGE KNELL. Chairs.

C. L. PHILLIPS & SON. Solar Camera.

If any exhibitors have been omitted I will be glad to add them if informed of the fact.

EDWARD L. WILSON,
Permanent Secretary.

The Committee on the Scovill and Holmes Medals.

EXTRACTS FROM THEIR PROCEEDINGS.

AMONG the offerings to the Committee appointed by the National Photographic Association to award the Scovill and Holmes Medals, were several very interesting papers, which we publish below, with the permission of the Chairman of the Committee, Prof. Henry Morton, Ph. D., and which we think will be instructive and useful to our readers.

As the committee were widely separated, they had to adopt the following plan of working. First, a limit was fixed for the reception of papers and articles for examination from competitors. When the time expired, these papers, &c., were divided among the members of the committee, who proceeded to experiment, and investigate the claims made in their share of the work. This being done, they reported such to the chairman of the committee, and in Philadelphia a meeting or several meetings were held to consider the several reports and make the award.

One of the most important claims was that of Mr. H. T. Anthony for his process for

using alum in the printing bath. It is as follows:

EXHIBIT A.

"591 BROADWAY, NEW YORK.

"*To the Premium Committee of the
National Photographic Association.*

"GENTLEMEN:

"I beg to offer my process of using alum in solution in the nitrate of silver bath, in competition for the premiums offered at the last meeting of the National Photographic Association.

"To use this process, first make a strong solution of nitrate of silver, add a little ammonia, shake well, and allow to stand and settle. Pour off the clear solution, and add a very small quantity of alum. The proportion I am using is two drachms to three pounds of nitrate of silver.

"I will state here that it is not absolutely necessary to add the ammonia to the silver solution, because I have used the alum in connection with an acid silver solution, and find that as thus used it is far superior to the plain nitrate of silver solution. It has two remarkable effects: first, it sensitizes the paper in an exceedingly short space of time; and second, the prints tone with most remarkable ease, and require very little, if any, over printing. The only objection to the use of the acid silver and alum solution is that the bath will become brown or red.

"Where the ammonia is used before adding the alum, I have never found the bath to become discolored. In fact, the action of the solution is to prevent the dissolving of the albumen; as a consequence, the skimming of the solution is almost entirely done away with, thus saving a great loss of time and of silver. As a further consequence the paper keeps perfectly well in hot weather.

"After the strong solution above spoken of is prepared, it is reduced by adding water to the strength of 35 or 40 grains to the fluid ounce. I find one minute ample time for floating, and from five to ten minutes sufficient for the ammonia fuming. In fact very good prints can be made without fuming at all.

"In all cases I use my process for washing, *i. e.*, soaking the prints from ten to fif-

teen minutes in a very weak vegetable acid solution, and subsequently rinsing in two changes of water. The toning is very easily effected in any good bath, and is finished when the prints have still a rich brown color; it is not necessary to carry it to the blue stage; thus there is a great saving of gold. By a calculation of the quantity of paper and gold used for two months last fall, I found that it took only $\frac{37}{100}$ of a grain of our chloride of gold to a sheet of paper.

"Another advantage I find is, that I can make good prints from thin negatives without difficulty, and consequently have much less loss of paper by imperfect printing. In fact the saving from this cause has been with me very large.

"As the committee may have read of failures in using this process, I will merely state that the failures have arisen in all cases from the use of too much alum. Mr. Taylor, editor of the *British Journal of Photography*, advises the addition of two grains of alum to one fluid ounce of a 25-grain nitrate of silver solution; our practice is to add about two grains to an ounce of the salt, a considerable less than his proportion, and considerably more than mine can be used without special difference in the result.

"I forward herewith some prints made by the above process on different kinds of paper.

"Requesting a careful trial of the above at your hands, I am, gentlemen,

"Your obedient servant,

"H. T. ANTHONY."

This claim was given to Mr. Charles Wager Hull, of New York, to examine, and to whom Mr. Anthony made the following additional communication:

EXHIBIT B.

"May 9th, 1871.

"C. W. HULL, Esq.

"DEAR SIR: I see by the last number of the *Philadelphia Photographer*, that persons competing for the premiums of the National Photographic Association should clearly ascribe the claims they make in behalf of that which they submit. As an appendix to the communication to the Ex-

aming Committee now in your hands, I beg to state that I claim for my process of using alum in connection with the nitrate of silver printing bath:

"1st. Economy in the use of silver.

"2d. Uniformity of the condition of the bath.

"3d. Prevention almost entirely of the solution of the albumen in the silver solution.

"4th. Economy of time in the operation of ammonia fuming.

"5th. Great economy in hot weather by avoiding the discoloration of the sensitized paper.

"6th. Increased ability to print from thin negatives.

"7th. Economy in the use of gold in toning.

"8th. Improvement in tone, the same paper being used.

"Very respectfully,

"Your obedient servant,

"H. T. ANTHONY."

MR. HULL'S REPORT ON THE ABOVE.

In a communication to the committee (without date) marked A, from Mr. H. T. Anthony, and herewith inclosed, he makes a general claim for the prize, and sets forth his plan of making up the silvering bath.

In paper B, addressed to the undersigned, dated May 9th, also inclosed, he makes detailed claims, which I shall answer so far as may be possible, in the short time that I have had to examine his claims.

Claim 1st. Economy in the Use of Silver.—I cannot admit this claim, so far as I have worked with Anthony's bath, at the same time working Bath "one" hereafter described.

Anthony's bath made *exactly as he directs*, containing 40 grs. of silver to the ounce.

Bath "one" containing 36 grs. to the ounce.

Practically an equal amount of paper floated upon each.

Anthony's now contains 37 grs. to the oz.

Bath "one" " " 33½ " "

Claim 1st cannot therefore be allowed.

Claim 2d. Uniformity of the Condition of the Bath.—This I cannot exactly under-

stand, it is somewhat vague; however, I fail to discover greater uniformity in Anthony's bath than in Bath "one."

Claim 4th. Economy of Time in the Operation of Ammonia Fuming.—In all cases, whether of my printing or in that of Fredericks or Kurtz, the fuming was the same as was given to prints made by the Anthony bath; and unless it can be claimed that the Anthony prints would have been improved by *less* fuming, this claim cannot be allowed. In my opinion they would not have been improved, and with less would not have been any better. In all cases the fuming was for ten minutes with ammonia conc.

Claim 5th. Great Economy in Hot Weather by Avoiding the Discoloration of the Sensitized Paper.—So far as I have been able to test this claim I believe it to be well founded.

I have silvered repeatedly the following papers on Anthony's bath *exactly one minute*, and have found that all *keep well* at this season of the year for forty-eight hours, *without discoloration*; in sixty hours or seventy-two hours all have changed to a greenish yellow; in ninety-six hours all to a brownish yellow—even then not worse than much paper printed by most photographers in the summer months. Paper silvered in Bath "one," was about equal to that of Anthony's of ninety-six hours in twelve hours.

The only paper which failed of the following was that of Trapp & Münch's, 8½ kilo, which discolored as badly in nine hours as did any of the others in ninety-six hours.

"E. A." Rive Paper,

Clemons's "

Hovey's "

Trapp & Münch's " 8½ kilo.

"Economic," Fredericks' paper, Rive.

I am therefore in favor of allowing this Claim 5th.

Claim 6th. Increased Ability to Print from Thin Negatives.—This I cannot admit; see prints by Kurtz, all very thin, particularly that of two girls so marked; and to some of my stereoscopic prints.

Claim 7th. Economy in the Use of Gold in Toning.—This I cannot positively deny, not having made any quantitative test; I, however, doubt its validity, inasmuch as the

prints by Anthony's bath did *not* tone any faster than those by other baths. *I saw every print toned* as well as silvered at Kurtz's and Fredericks'.

I am therefore opposed to the 7th claim.

Claim 8th. Improvement in Tone, the same Paper being Used.—This I also oppose, and refer to prints for proof of my position; some are best of one kind, some are best of the other; the difference in all cases being due to either more or less printing, as may have been the case.

Of prints inclosed there are:

8 pairs (16), of Fredericks'.

5 " (10), of Kurtz's.

8 " (16), of Hull's stereoscopes.

And 4 single ones.

All are marked as to paper and bath; each pair was, except as stated below, silvered, fumed, printed, and toned the same, and upon the same day, except the Fredericks, which were silvered three-quarters of a minute upon Bath "one" (his bath), and are upon his paper—the "Economic" Steinbach.

Kurtz's prints were all silvered one minute on Bath "two," and are upon Fredericks' "Economic" Rive. The toning of Kurtz's, Fredericks', and my printing, where marked with an S, was all done in a bath made slightly alkaline with sal soda; those of my printing, marked A, were toned in Anthony's bath. (*Mosaics* for 1870, p. 26.)

Bath "one."—To $\frac{1}{2}$ gallon of 35 grs. silver solution, add about $\frac{1}{8}$ of an oz. (fl.), muriatic acid; shake well; make alkaline with ammonia.

Bath "two."—40 grs. nitrate of silver.

Anthony Bath.—See Exhibit A.

My conclusions are therefore to admit Claim *five* as proven for this season of the year, and comparatively so for the summer; all other claims I cannot agree to as proven by my trials.

I regret exceedingly that my examination could not have extended over months instead of weeks. Then, perhaps, I could have reported more intelligently on *all* points.

I have made thus full a report, doubting my ability to meet with you in person, owing to most pressing business demands.

All of which is respectfully submitted,

CHAS. WAGER HULL.

After the above, Mr. Hull made the following additions to his reports:

I beg to add in addition to my report the following, with the request that the same be considered a part thereof.

When I commenced my investigation of H. T. Anthony's alum bath, I wrote to him for fuller information, and stated when I met him subsequently, that I feared being able to test the keeping qualities satisfactorily, inasmuch as to do so summer weather was needed; and asked him to procure certificates from those who had used his bath as to such qualities.

I am to-day in receipt of two certificates, extracts from which follow.

One from G. N. Barnard, whom I know well, an *altogether reliable* man, dated Charleston, S. C. He says:

"I have used your formula for alum in the silver bath with most satisfactory results. In this warm and damp climate it has been very difficult for us to get out our work with the old process without discoloration in hot weather.

"With the addition of alum the paper remains white from early in the morning until late in the day.

"I consider it a very valuable discovery.

(Signed) "G. N. BARNARD."

The other from C. Meinerth, Newburyport, Mass. He says:

"We obtain very good results with a weak, plain silver bath and fuming, but I insist that alum increases the benefit in every respect.

"1st. Any kind of good paper will keep white two or three days after fuming.

"2d. 20 to 40 grains silver bath, with a half minute floating and ten minutes fuming, gives as fine prints as 120 grains silver bath.

"3d. The bath keeps clear without the necessity of clearing it up with clay, &c. (except of course when a foul paper is floated).

"4th. The prints can be taken out of the gold toning bath *before they are half toned*, and the hypo will not attack them as much as without the alum, and a beautiful tone will remain.

"This is my experience in practice, &c

(Signed) "C. MEINERTH."

As will be seen by my report, I fully indorse all that has been written by G. N. Barnard.

The only point not touched upon in my report, is that given by Meinert in his third point above; on this I have to say that the alum bath remains perfectly clear, as he states.

I am not satisfied that its so remaining is due to the alum. I believe it to be due to its previous treatment with ammonia, and rendering it alkaline.

Truly, &c.,

CHARLES WAGER HULL.

P. S. I fear that I shall not be able to be with you, being quite unwell; will come if possible.

C. W. H.

As will be remembered, the Holmes medal was awarded Mr. Anthony for his process.

The next paper we append is on the subject of printing pictures on porcelain, and is from Mr. W. H. Sherman, Milwaukee, Wisconsin, as follows:

AN IMPROVEMENT IN PORCELAIN PRINTING.

After toning and fixing the print made on the collodio-chloride film on a substratum of albumen, the porcelain is immersed, (after thorough rinsing) in a solution of caustic potash or soda, about 1 oz. to water 1 quart.

The albumen is softened or dissolved by the alkali, and by a law of osmotic action all crystallizable matter is expelled, the collodion film being the septum.

By this means the hyposulphite of silver and soda, and any sub-salt of silver remaining, is undoubtedly ejected. The object in view, and which I sought to accomplish in addition to the removal of the hypo, was to render the print if possible like a developed picture, in respect to the quality of the silver deposit. The print must have sufficient body and vigor to admit of being fixed in a strong bath of hypo soda. The bane of porcelain prints is *weak* hypo. They should be able to stand at least eight ounces to the quart, with $\frac{1}{2}$ to 1 oz. sal ammoniac. The formation of any insoluble sub-salt will thus be prevented. Every trace of the fixing bath may be afterwards displaced from the print, leaving nothing to disturb the future peace of the precious metals remain-

ing. After removal from the alkali, the picture must be thoroughly and carefully washed; preferably by leaving under the tap, and allowing the water to drip upon it for several hours.

It is then, after drying, varnished with a varnish made by dissolving

Gum Elemi,	. . .	1 ounce, in
Alcohol,	. . .	8 ounces.

This varnish possesses peculiar excellencies for porcelain or other pictures, which are to be protected by a covering of glass. It seems to be absolutely and forever impervious to water, in which a picture varnished with it may remain months without the least effect. Potash that will remove *paint* readily, or dissolve ordinary varnish from negatives in a few hours, does not affect it. It also admits of being colored with oil, water, or dry colors.

The picture, when inclosed between the porcelain on one side, and this *perfectly* water proof varnish on the other, without anything to form the basis of future disturbing or disorganizing chemical action, imprisoned with the metallic deposit, may reasonably be expected to be permanent under ordinary conditions.

We know from experience, that a sulphide of silver print on *paper*, is very unstable; but a sulphide of silver *negative* on *glass*, when varnished with a durable varnish, seems capable of any amount of exposure to direct sunlight without change.

From such experience as I have been able to acquire while using the above process, I am led to believe that pictures so treated will not, under ordinary circumstances, suffer change.

If required, I will send some of these pictures by express; but as perhaps *time* is the only test that can *prove* anything of real importance in relation to the value of the process, would it not answer every purpose if I should take them with me when I attend the Convention?

The value of the varnish can at least be tested, so I will send on samples at once.

Yours, truly,

W. H. SHERMAN.

After the above was received a few days,

Mr. Sherman sent the following additional communication:

I inclose a print (the soiled condition of which please excuse) on which I tried the effect of the application of caustic alkali, as set forth in my porcelain process, which I offer to the Committee on Discovery, &c., as an evidence of the benefit of the process.

I first flowed the print with plain collodion, dried, and then placed it in the lye for an hour or more. The print was only partially washed *before*, and only rinsed *after* being in the lye. It was then half covered by placing thick cardboard in contact, in a line indicated by the pencil marks, and placed in a window where it has remained until a few days ago. Certainly, the exposure would have changed the exposed portion, had it not been in the lye.

Does not the alkali change the metallic deposit from a suboxide to a metallic state, or to a form more closely allied to the developed picture? If oxidation of the organic matter with which the metallic deposit is associated is a cause of the spontaneous fading of photographs or porcelain prints, will not the alkali serve to prevent oxidation and the fading consequent thereon?

Let me further submit, that certain *varnishes* cause rapid fading of porcelain prints. Also, that the coagulated albumen on the *porcelain plate* will not, by any amount of washing which it usually receives or is ever likely to receive, part with the hyposulphite of soda and silver retained by it. Hence the importance of the softening and solvent action of the alkali.

The only excuse for sending this print is that it is the *first* experiment with the alkali on an albumenized paper print, and that it seems to me to promise beneficial results.

Very respectfully,

W. H. SHERMAN.

Mr. Sherman's claims were given to M. Carey Lea, Esq., for examination, who reported as follows:

REPORT ON

MR. SHERMAN'S CLAIM FOR IMPROVEMENT IN COLLODIO-CHLORIDE PROCESS UPON GLASS.

Mr. Sherman proposes to increase the permanence of collodio-chloride prints on

glass, when made upon an albumen substratum, by treating the picture with a solution of caustic potash.

As his claim is for greater resistance to the destructive power of *time*, it is impossible here to make a report of a decisive character; this could only be done by taking a quantity of specimens, some subjected to the treatment proposed, and others not, and by placing them aside under ordinary conditions for some years. Any other mode of trial would be wholly inferential in its nature, and we know very well that such modes of reasoning are not admissible in photography.

It seems allowable, however, to make the following observations connected with this subject.

An albumen substratum is a well-recognized source of fading in the case of collodio-chloride prints on glass. Nevertheless, it has the attraction that it secures the film solidly (collodion made with the *chlorides* never adheres so well to the glass as that made without them does), and it also gives with more ease a rich tone. The first of these difficulties may be avoided by either edging or coating with India-rubber varnish, and the second is not very serious.

Mr. Sherman, however, prefers to use the substratum, and believes that all its dangers may be removed by subjecting the plate to the subsequent action of caustic potash. As already said, time alone would determine with certainty what degree of advantage the treatment confers, and whether plates so treated are as permanent as those made without the substratum.

The following experiment may, however, throw some light on what takes place when the compound of albumen and silver is treated with the alkali.

Some white of egg was coagulated by adding it to a solution of nitrate of silver, and the excess of the silver salt was washed out by successive decantations. A portion of the coagulum was then thrown into a strong solution of caustic potash. For a time, little or no action was evident, but on examining the liquid some hours after, the whole coagulum was found to have dissolved except a few shreds and a little brown pow-

der, which last was, of course, oxide of silver.

The conclusions to be drawn are as follows. Caustic potash is capable of decomposing the compound which silver forms with albumen, the albumen dissolving in the form of albuminate of potash. But this action is not rapid, and it seems evident that if, in the case of an albumen substratum, the action of the caustic solution were to be carried to the point of causing this decomposition, and thus rendering the albumen soluble, then the hold of the film upon the glass would be destroyed, and it would slip off, because it is only in its insoluble (coagulated) form that albumen can act to give adhesion. Mr. Sherman therefore certainly does not carry the action of the alkali this far, but only to partial decomposition. And as I have already said, how far the protecting action thus obtained would go, could only be determined by the actual trial of putting aside specimens until the influence of time should indicate on which side is the preference.

Mr. Sherman holds that collodio-chloride work which will stand a strong fixing bath, will, other things being equal, be more permanent than those fixed in a weaker one. I expressed some years ago, in print, the same opinion with regard to paper prints, and the principle evidently extends to both descriptions of prints.

M. CAREY LEA.

There were several other communications, but the above were the only ones of special interest. We hope that both will be tried and reported upon.

The Scovill Medal was awarded to Mr. Lyman G. Bigelow, Grand Rapids, Michigan, for his Graded Background, and Photo-Curtain.

To Clean Glass for Collodion and Silvering.

BY ALBERT S. SOUTHWORTH.

RASP off the edges and corners with a wet sandstone (a scythe whetstone is just the thing), drawing it at an angle and diagonally from the face of the glass, to avoid

chipping the surface. Whether new or old glass, varnished or unvarnished valueless negatives, wash thoroughly in clean hot water and immerse in a very strong solution of boiling potash, from three to five minutes, or longer if old hard varnished glasses. Scrub with a fine broom brush upon a padded board, covered with tightly drawn flannel, in clean hot water, rinsing thoroughly, and then rinse off in clean cold water, and coat before dripping with thinned albumen, two or three ounces to the pint of water, from newly laid eggs, with four or five drops of aqua ammonia. Dry and keep from dust, moisture, and light, chemically clean. Use at pleasure; time will not deteriorate.*

REMARKS.

Glasses having upon their surfaces pure metals as silver, copper, gold, or any other metal, must have the same removed with the proper acid, or aqua regia, before using the potash; but all glasses prepared according to the foregoing recipe, can have no free pure metal in contact with their surfaces.

The albumen should be freshly made and very thin.

A common sheet-iron bakepan will answer to boil the potash in, on an ordinary cook-stove.

Scatter a layer of edge cuttings of various lengths from common glass, of the size of an oat straw, on the bottom of the pan, and between each layer of glass, to prevent contact of surfaces.

Keep the hands clear of any caustic by using wooden tongs, and a little skilful manipulation, and do not scratch the glass in the least.

Never pack glasses together flatwise, nor lift them so that one rests upon another, but let each support only itself.

My method of cleaning glass may not be all new, and may not be the best known. It is the best I know; the simplest, and always avoids dirty, foggy, or stained glasses, or peeling off of the film.

* Every dwelling-house having modern improvements for using hot and cold water, and freestone washtubs, has precisely the conveniences for the above process of glass cleaning.

6.



7.



8.



9.



10.



12



13



14



15.

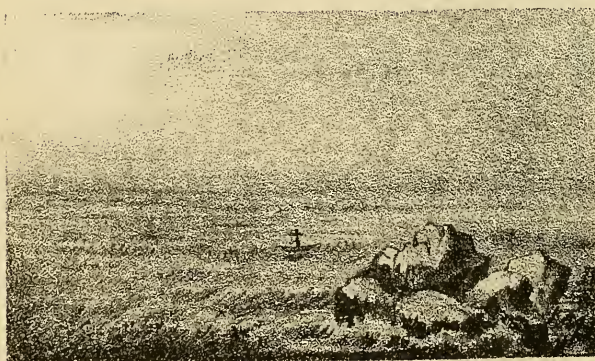


Fig.1

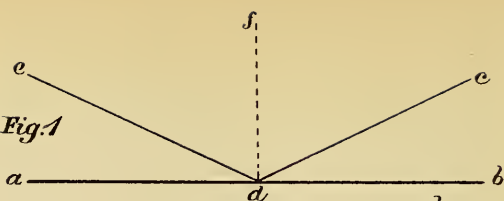


Fig.2

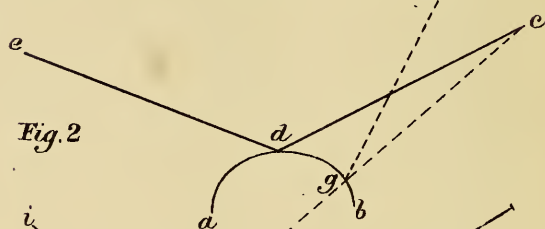


Fig.3

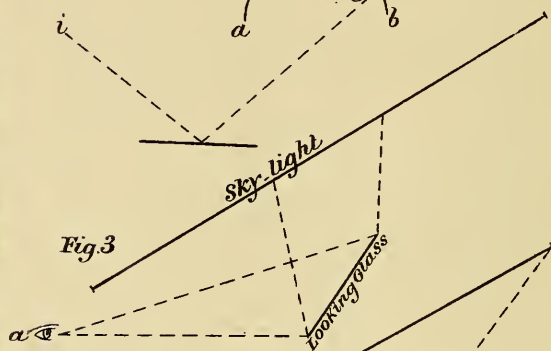


Fig.4

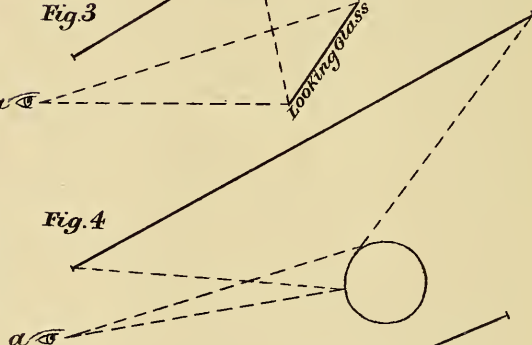
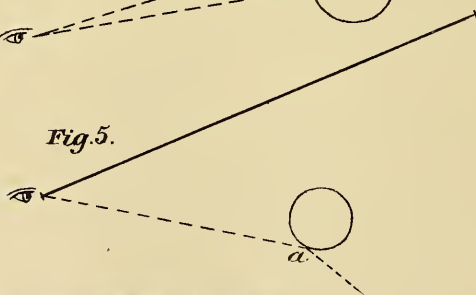


Fig.5.



PICTORIAL EFFECT.

MR. PRESIDENT AND MEMBERS OF THE NATIONAL PHOTOGRAPHIC ASSOCIATION: It is mentioned in treatises on optics, that light always proceeds in straight lines, and that when a ray impinges on a smooth surface, and is thrown off, *the angle of incidence and the angle of reflection are equal.*

Thus (Figure 1), a smooth surface $a b$, a ray of light $c d$, coming from c will be thrown off in the line $d e$, and the angle of incidence $c d b$ equals the angle $e d a$, the angle of reflection. This law holds true for rays coming in any and all directions. Thus a ray falling perpendicularly on $a b$, and making a right angle, $f d b$, will return on its own path.

If now the reflecting surface is curved, $a b$, Figure 2, instead of straight, the law equally holds; $c d$ striking $a b$ at d passes to e , but a ray from c striking at g would, by the curved surface, be returned to h , and by the straight, to i , the angle of incidence and the angle of reflection being both modified by the curvature of surface. I cannot, of course, pretend to draw these figures with any degree of mathematical accuracy, but they will serve to illustrate the theorems.

Now we are ready to go right under the skylight, and see a little something of what happens there. If we have a looking-glass, and a polished ball under the light, we will find that the first can be placed so as to seem full of light, bright all over. The ball will give a bright spot, and the rest of the surface will be darker. This is explained by our law. The source of light is limited by the size of the aperture. The eye, of course, sees only those rays that enter it.

Let this diagonal line (Figure 3) be a section of the skylight. The eye at a , directed to a flat glass, will see the whole glass equally bright, and a portion only of the image of the skylight; but in Figure 4 the eye sees the image of the whole skylight, but only a portion of the sphere very bright in *high-light*, distinguished from the rest in half-tone. A flat surface gives us therefore an equal, and a curved surface an unequal, illumination.

This is a point particularly to be noticed, as we thus see whence is derived the power of making plastic pictures. Objects in na-

ture reflect more or less light at different points of their surface, according to the variations in form of that surface (I choose to consider form only, at present, not color or texture, so as not to complicate consideration). In other words, they appear spotted, and by putting down those spots, as they appear to the eye, we make the picture, and give it relief.

It is said that light always proceeds in straight lines. If this is so, how is it that when a ball is placed as in Figure 4 we can see the whole of it, and not only the bright image of the skylight. Certainly a ray that touches the ball is useless for vision unless by reflection it enters the eye; and as by no possibility could a ray from any part of the skylight strike the ball at a (Figure 5), and meet the eye, that part of the ball ought not to be visible at all.

This would be the case but that every object in the room, the floor, the walls, the furniture, all are reflectors, and the air also diffuses light by refraction (how, we cannot stop to inquire), so that between the reflections and refractions, we have in the operating-room, a large body of diffused light, coming from all possible directions, and mixing with the direct light, to form half-tone, and measurably illuminating the deepest shadows, its influence on the high-lights being hardly appreciable.

The operator, then, uses not as is generally said a light, but two lights, one direct, the other diffused; and these are the tools with which all light effects are carved out. Direct light for the high-lights, diffused light to work out the shadows, and a union of both for the half-tints.

It is evident that we should have means of controlling these two illuminations, the direct and the diffuse, both in direction and quantity. This can be done by an effective system of blinds, screens, and shades, which it is not my present province to describe. I must suppose that your skylights have such apparatus, and go on to mention a few of the artistic qualities that should thereby be introduced.

I will confine myself to four, the four chief; all of them should coexist in every picture. It is their harmonious union which creates artistic treatment, redeeming

what would else be vulgar and trivial. In a measure they are contradictory and opposing qualities, but like discords in music, add to the resulting harmony.

They are BREADTH, DEPTH, SOLIDITY, TRANSPARENCY; let me repeat them, *breadth, depth, solidity, transparency*. I ought to add a fifth, *delicacy*, but that will appear incidentally.

Breadth.—If we have a straight flat surface (as 6), evenly lit, it might be called a sort of breadth, but it is uncertain; it conducts the eye nowhere. If, now, more light is given to one side of the surface than to the other, and from light to dark it is evenly graded down (as 7), we have true artistic breadth of the simplest kind. To get the greatest breadth, we must not have too severe grading.

Figure 8 has more shading but not the breadth of Figure 7. Hence much breadth cannot be obtained without considerable extent of surface. It is impossible to treat a small picture with the same degree of breadth as a large one, and in the large one this quality is more demanded. Figure 7 is the simplest kind of breadth. How shall it have grace and variety? By a broken system of shading. Not thus (9), nor thus (10), where the highest light or deepest shade is in the centre of the picture, and balanced by an equal grade on either side, like the arms of a pair of scales, but thus (12), or thus (13), &c., *ad libitum*. And here let me say that I hope you all have my idea, which is a difficult and abstract one.

The grading you are to understand as expressing the amount of light which is falling on a surface, of the background, if you will. Then, if on this background we introduce a portrait, say with the Rembrandt effect, the grading of light, as formed in the picture, would be like this (14): the highlight of the face at *a*, lightest point of the background at *b*, deepest shadow on the head at *c*. The general breadth is broken, and would have, perhaps, a graceful variety, only don't let any one imagine that I have tried here to draw a face; masses of light and shade only are represented. And you see too, that when we cease to consider the grading in section only, and imagine the lights as advancing out of a flat surface,

that the means of breaking and variety are infinite.

Every object that can catch a light or throw a shadow, tends to distract attention from the general flow of light through the picture. Detail is a natural enemy to breadth.

The fine sharpness of every object in the photograph, and the presentation of many objects, all which has been the custom of photographers, kills this goodly quality entirely. Further you perceive what allies are delicacy and breadth. It is from the delicate shading of Figure 7, that we gather an idea of breadth, rather than from the abrupt one of Figure 8, though one is as simple as the other. The largest figure will also give a further example of breadth, and illustrate my meaning on this point.

Well, you may think I have harped considerably on this one word, and I will take up the next.

Depth.—This also means contrast between the darks and lights of a picture; but if we jump right down at once from white to black (15), we get no idea of the artistic value of the quality. This is obtained only by grading, while it is dependent not so much upon extent of surface as upon degree of contrast. Delicacy, the friend of breadth, is the foe of depth, and breadth is itself antagonistic to more than a certain degree of depth.

I refer again to Figures 7 and 8; 7 excels in breadth, 8 in depth; each coexists only with a certain quantity of the other. Depth again is not affected by what will destroy breadth. That symmetrical balance represented in 9 and 10, does not take away the first, though as I have said, it kills the second, by preventing the eye from obtaining the idea of a single direction of the light through the whole picture. The light loses its sweep. To further note the difference, breadth is obtained by joining light to light, and dark to dark; depth, by opposing dark to light.

Next, what is *solidity*? We hear it said of a portrait that the head is solid. It is an effect obtained something in the same way that breadth is, by lighting in one direction, and like depth, it deepens a good deal on the amount of contrasts. It is a fine quality within limits, in excess it tends

to hardness. No diagram will express it; it must be seen in the actual picture. Let me without disparagement to the works of any other of our brother artists, mention Mr. Ryder, of Cleveland, as obtaining in his exhibited photographs, this quality in its fullest extent. The picture of himself is solid in the head as can be, and your previous and future study of these and similar pictures, will save me the almost impossible task of further explanation.

Solidity and delicacy you notice are at variance.

Still more difficult is it to treat of *transparency*. It is a delicate quality, a rare quality. Few pictures of any kind contain it. When found, it shows the hand—brain, rather—of a master. Look for it in the shadows only; when these seem to gleam with a phosphorescence, when they have a luminous nature of their own, when they appear to transmit light from behind themselves, then they have this exquisite beauty of *transparency*. It is found easiest in Rembrandt effects on white drapery. It ought to exist in the shadow side of every face, especially those made in the Rembrandt style.

It is obtained by reflected lights crossing the main light. Found most naturally in white drapery, because one fold throws light back into the shadow of another; rarely in the face, because the reflected light must be adjusted so as not to swell into obtrusive conflict with the principal light. It is the direct antagonist of solidity, but no particular friend either of depth or breadth. To adapt a proverb: "Solidity is silvern, transparency goldern"

All four of these qualities must, absolutely must, coexist in any picture that makes claim to the first class. Is this a paradox? Depth destroying breadth, solidity against transparency; but with the two former, detail and delicacy, a friend to mutual foes and inimical to mutual friends, yet all bound in a common harmony.

Truly is it written, "*Ars longæ vita brevis est*," if art is only found in the solution of this complex problem.

Well! do not give up. Many of our leaders, men that have wielded an immortal brush, have been illustrious rather by the

perfection in which some one quality has been found in their works than by the perfect union of all. They are grand, noble painters, but in a one-sided way.

Would you ask me for a formula, in what proportions to mingle our four qualities? That cannot be given. Here it is that subtle thing *TASTE*, has its play, and transcends rules. This offspring of a chaste, correct, intelligent feeling, operating through a trained eye, must be your supreme court, your place of final appeal

Endeavor always to refine and balance your taste; in this way alone can the eye be brought to see rightly, for the eye is only an instrument, and does only what the mind sets it to do, and with only the amount of thoroughness that the mind desires; and no mistake is commoner, or more pernicious to art, than the supposition, that any and all eyes can see the whole of anything, even the simplest object. No eye sees the whole; the trained eye sees best and most, but even the eye of your camera does not see all, and like other eyes without brains, cannot record all of what it does see.

As a means of elevating your taste read, study to find out what you ought to admire. The greatest critic of modern times, Sainte Beuve, says to this effect, that "in looking at any work of art we ought to ask ourselves, not, does this please us, but ought we to be pleased with this?" To this end read; read the literature of your profession; go beyond this, read first John Ruskin. With some exceptions he is a noble guide, and the exceptions do not apply where they would be apt to hurt you. Begin with his "*Elements of Drawing*," continue with the "*Modern Painters*," and then devour all of his that you can lay hold of. He has, of course, much to say about color. That is not exactly our province, but he has also much to say about light and shade and representation of form, and that hits us photographers exactly. Let him speak for a moment.

"There is no better test than your having made the white in your picture precious, and the black conspicuous. I say, first, the white precious. I do not mean merely glittering or brilliant; it is easy to scratch white sea gulls out of black clouds, and dot

clumsy foliage with chalky dew; but the white when well managed ought to be strangely delicious, tender as well as bright, like inlaid mother of pearl, or white roses washed in milk. The eye ought to seek it for rest, brilliant though it may be; and to feel it as a space of strange heavenly paleness, in the midst of the flashing of the colors. This effect you can only reach by general depth of middle tint, by absolutely refusing to allow any white to exist except where you need it, and by keeping the white itself subdued with gray, except at a few points of chief lustre.

"Secondly, you must make the black conspicuous. However small a point of black may be it ought to catch the eye, otherwise your work is too heavy in the shadow. All the ordinary shadows should be of some tint—never black, nor approaching black. They should be evidently of a luminous nature, and the black should look strange among them; never occurring except in a black object, or in small points indicative of intense shade, in the very centre of masses of shadow."

This is from the "Elements of Drawing." Sound doctrine it is. Hard high aim, let it be ours, to make our lights precious, our shadows luminous, our blacks conspicuous.

Ladies and Gentlemen, I thank you for your patient attention to this attempt to unfold a few of the more abstract ideas of art. If I have been tedious and obscure, I frankly confess feeling my own weakness, in dealing with these difficult themes.

W. J. BAKER.

BUFFALO, N. Y.

ON THE MODEL SKYLIGHT.

MR. A. K. P. TRASK, of Philadelphia, gave a description of the model skylight, furnished the meeting by Mr. Edward L. Wilson, and partially superintended in its erection by Mr. Trask—Mr. J. C. Harmon, builder—and said:

MR. PRESIDENT: I hardly know what I have been called on to do. I won't attempt to explain anything I have no knowledge of. I will only explain that which I have worked myself, and know the workings of.

This model was intended to represent a light 20 feet wide and 35 feet long. The lowest point on the north side is 10 feet high from the floor. The side light is 9 feet high, coming within one foot of the floor. The length of the light is 35 feet, and the width 20 feet.

They have in Europe a number of lights built with like proportions. I have read accounts of them, and have seen the work made under them. I have also conversed with several individuals who have worked them, and from what I have been able to learn I believe that under such lights with proper arrangements for controlling them, a man who understands his business can produce at any time in the day, either sunshine or cloudy, any effect he pleases.

You see over this light a set of blinds, E, E. I will set them about as they require to be set at noonday. The object of these blinds is merely to cut off the rays of the sun, so you will receive no direct sunlight on the glass. In setting these blinds the shadow of the top of one blind should fall at the bottom of the other, then the light will be nearly as soft and quite as good as though your skylight was in the shade of some tall building. In the summertime, when your thermometer stands on the street at about 105°, under that light it will stand from 95° to 98°.

Now take these blinds off, and let the sun pour in, with the same ventilation; your thermometer will then stand 115° to 122°. So you see, for your own comfort, and for the comfort of the subject, you have an advantage there you can get in no other way, unless in the shade of a tall building. I have tried these blinds for over a year, and I find that to be the fact in regard to heat.

Mr. C. L. Lovejoy, who first put such blinds on his light, is here in this city. Mr. Lovejoy covered his blind-frames with common heavy muslin. After examining his, I covered mine with canvas. Another brother in this city put up a set of blinds like this, but he covered them with wood 3-8 inch thick, and painted them, I think, a bluish tint; he found they worked very well. Canvas works very well. For a small light I think muslin better than anything else. For hailstorms such as we have

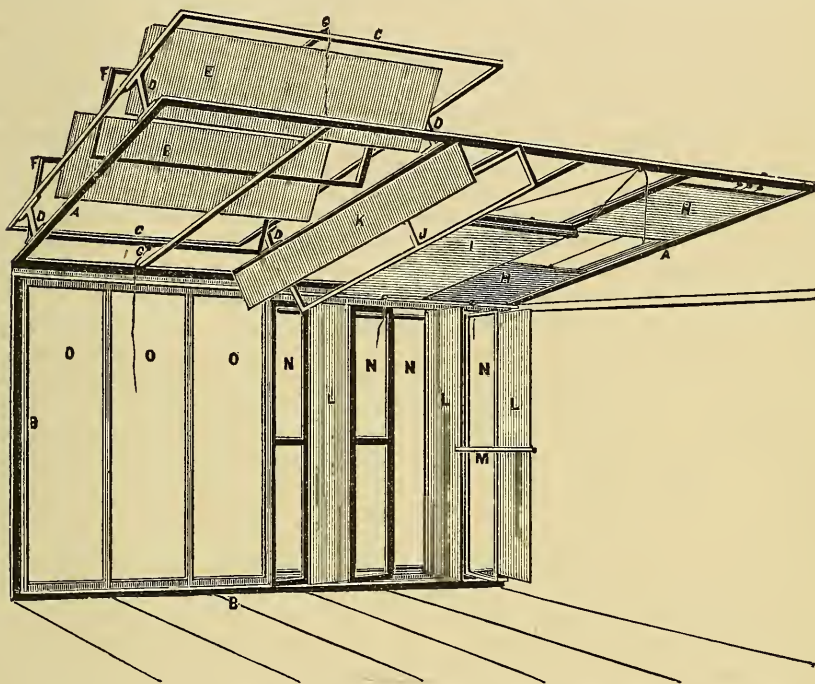
been subject to here in this city for the last few years, heavy canvas is better, otherwise I would just as soon have the muslin.

At night, when we get through, or if we see a heavy shower coming up, we shut those blinds down, and fasten them with a cord, attached to the blinds, working on pulleys, the cord left loose after drawing down tight. I have had the cord strained

summer when I visited there, blinds of this description, and the light through them looked very fine to me. I never have used them, and can't speak of them from actual knowledge.

If you want the light direct on the sitter, you can turn the blind to suit. I don't see that any further explanation is required.

Here is a curtain, I, on a spring roller.



Model of a Skylight used at the Sessions of the National Photographic Association in Philadelphia, 1871.

A, A, the framework of the top light all glazed, which is made so it can be used as shown in the cut, (top inclination and side to the north,) or by elevating one end and lowering the other, turned into a studio with north top inclination and east or west side light; B, B, the frame of the side light all glazed; C, C, the frame of the top blinds; D, D, D, D, the uprights supporting the frame C, C; E, E, top blind frames covered with canvas; F, F, ditto, uncovered; G, a glazed top sash, without inside curtain or blind; H, H, wood sliding frames, covered with tissue paper after Mr. Kent's plan; I, a spring roller curtain; J, movable top blind-frame uncovered; K, ditto, covered; L, L, ditto, for side light; M, same as L, only uncovered; N, N, N, N, side frames uncovered, and outside sash showing through; O, O, O, side sash glazed and exposed inside, and may be covered by either of the arrangements shown by H, I, or J.

pretty hard on account of a shower and wetting of the cord, and the cord shrinking.

The blinds, L, L, L, on the side, I never have worked. Those on the top, at K, are intended to be covered with blue tissue paper. I saw in New York, last

I have worked such a curtain both on the top and side light. I presume there are many in the hall who have worked them. I can only attempt to explain that as I understand it, and I may be wrong.

The intention of this spring roller is to

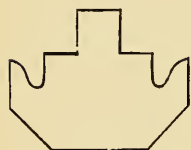
make it convenient. You can draw it down or up to suit yourself, and it remains in its place when you let go the cord; this is so arranged that you can let it down at the top.

The object of the letting down at the top is merely so you can receive light at the top.

If you want to receive light at the top and bottom, just let this curtain down at the top, and roll up as far as you want it. If you don't want any light at all, you can roll your curtain down. I believe this manner of hanging curtains is an improvement.

The sliding curtain-frames, H, H, are after Mr. Kent's suggestion, I believe, and he explained them yesterday, as well as in a late number of the *Philada. Photographer*.

The advantage of a long studio like this enables you to produce light in any portion of your room at any distance from your model, or even directly over your model. That is the advantage I claim over a *short* light. Under this arrangement you can subdue your light in any way you desire.



You will find by examining the top sash of this model that you can have your skylight as dry as your parlor; not one drop of water or rain can get through to fall on your floor. This

sash has a gutter in it that receives all water that gets under your glass, and conducts it outside (see cut of an end view of the gutter sash, above). This gutter being lower than the glass, the water passes over the gutter, comes to the sash, then runs down into the gutter, and off to the waste-pipe.*

DOCTOR PHOTO.

BY H. H. SNELLING.

In reading the report of the proceedings of the Third Anniversary of the United States National Photographic Association in your July number, the remarks of the Permanent Secretary at the opening of the "Reception" suggested the subject of the present paper, which I substitute for a process I intended to send you for your August

number, as, it seems to me, it will come in here more appropriate than at another time.

Photography has "reached" far and become more or less intimately connected, and even amalgamated, with many of the arts and sciences. As an aid to painting, its utility is now undisputed by the best artists, although I can remember the time when "artists," so-called "par excellence," turned up their noses at the bare idea of "artistic photography," and sneered at the assertion that it would one day become a great rival of the "divine art of painting," both in portrait and in landscape—artists who have since *been obliged* to throw aside their prejudice, and choke down their pride, and seek the aid of the camera and collodion, and make photography a specialty, to recommend them to the public as surety for the production of perfect likenesses as well as artistic portraits.

Then I remember again that many landscape painters call in photography to aid them in their studies of nature; the mechanic illustrates his inventions and handiwork by photography; to the student of nature it reveals to perfection the wonders of the microscopic world; while it has upset many of the absurd theories of astronomers, geologists, and others.

I might go on and point out many facts in corroboration of these remarks, but I did not sit down for this purpose. My intention is to present a phase—if I may be permitted the expression—of photography not hitherto touched upon; namely, photography as a physician. And I wish to do this for two reasons: first, because it will show the "extent to which photography can be carried;" and secondly, because I know that many of the sons of the sunbeam are sufferers by the almost universal diseases for which photography is the special physician.

What think you of neuralgia, rheumatism, toothache, and kindred excruciating torments, being entirely under the control of photography? Esculapius may laugh at the assertion, and so may Galen, but it is nevertheless true, and I will tell you how I discovered it, and then give you Doctor Photo's "Practice of Medicine" in a very few words.

* This paper closes the report of the proceedings of the Nat. Phot. Assoc.—Ed.

In the year A.D. 1855, I labored under a severe attack from the demon Toothache, who for eight days discharged his batteries into the stronghold of my citadel, and did considerable damage. During this time I waited upon a dentist, and had a tooth extracted which he asserted was the damaged molar, but which, on examination, proved to be perfectly innocent of any conspiracy to make me uncomfortable. A day or two more of suffering took me to another "dental artist," who, after pulling and hauling, and jerking and twisting for an hour, declared that the enemy was impregnable, having secured himself by "four hooked prongs" so that nothing could part tooth and jaw-bone, but if one must come the other would follow. Here was a precious prospect ahead—an indefinite period of suffering without the least hope of any known remedy being capable of effecting a cure, as I had tried them all. I returned to the store and worked until 4 o'clock, P.M., in most "excruciating agony." At that blessed hour, the good little invisible sprite, Doctor Photo, at my elbow, suggested "Try so and so." Instantly I acted upon the suggestion, and in five minutes all pain had ceased, and before the hour of "shutting up shop" arrived, the swelling in my face, which made me look like a "double header," had subsided, and "Richard was himself again," and the "fiend Toothache" has never troubled me from that day to this. A dear friend had suffered for two years with neuralgia, and had spent much substance upon the doctors, who did her no good, but she rather grew worse. So, when I experienced the magical effects of Dr. Photo's prescription, I said to myself—"If so good for the toothache, why not for neuralgia also?" I took some home—just a two-ounce vial full—which was "applied as directed," and all traces of the "demon Neuralgia" disappeared in two weeks, and never returned afterwards.

Old Rheumatism, that arch fiend who so delights in tormenting poor human nature, and usually, when he gets hold of you, gives you an idea of the "thumb screws" and "coats of mail" of the old "Inquisition," took up his abode in the framework of this poor tabernacle of flesh, and for years

refused to vacate at the behests of several M. D.'s; and there he remained, pinching and gnawing, scraping and nipping, until Dr. Photo again came to my assistance, and advised me to use such and such things in connection with the prescription given me for the toothache; of course I compounded the prescription, and took it "according to directions." The old scoundrel Rheumatism departed, "horse, foot and dragoons;" and although he has made several attempts since to effect a lodgement in his old quarters, I have successfully foiled him by Dr. Photo's artillery practice—for we must confess that there is considerable war material in his practice.

I have, since those days, been the happy "medium" of driving these vindictive and malicious spirits of evil out of a great many into whom they have entered and sought to destroy, and I hope this communication will be the means of driving them out of many more.

This is what Dr. Photo said to me on the first occasion. Take

Alcohol,	.	.	.	.	1 ounce.
Sulph. Ether (Conc.),	.	.	.	.	1 "
Iodide of Potassium,	}	to the oz.	10	grains.	
Bromide "					10 "
Gun Cotton,					6 "

Mix them, and put a little of the solution in your tooth on cotton, and rub the gums well every day, as often as possible, for two weeks. This done, the result you have stated.

You will perceive that the prescription is almost identical with the photographic collodion formulas of the present day; and also that I have a show of right to claim priority in the use of ether as a "pain killer."

The second prescription of the good little doctor was—

Iodide of Potassium,	.	.	.	1 drachm,
Bromide "	.	.	.	1 "
Proto. Sulph. Iron	.	.	.	1 "
Citric Acid,	.	.	.	1 "

made into 2½ gr. pills; two to be taken every morning, half an hour before breakfast, for six or ten days, then stay four days; repeat, increasing the intervals after each repetition, until old "Rhenmatics" has evacuated the premises. While using these pills, use also the solution freely, rubbing the parts affected frequently. Observe the

same rule for neuralgia. These pills are also an excellent tonic and powerful invigorator.

Hundreds have blessed Dr. Photo for these prescriptions, and doubtless many among "The Fraternity" will do so also, if they follow his advice—especially those who are most "sensitive" to the "manipulations" of those ancient enemies of the human race, Rheumatism, Neuralgia, and Toothache.

Developers and Development.

BY M. CAREY LEA.

A SHORT time since, in writing of the effects of developers of different strengths, I mentioned the advantages which could be obtained in cases of great contrast by giving a long exposure followed by a weak developer. It chanced that, about the same time, Mr. Elbert Anderson recommended a similar developer to be used where there was a deficiency of contrast. This recommendation of a similar treatment for opposite conditions has seemed to some inconsistent.

It is not, however, in the least so. I have always recommended a weak developer for objects deficient in contrast, and the propriety of its use in such cases has long been well understood. The other fact, namely, that a weak developer may be advantageously employed for an opposite class of subjects is much less generally known; it is not new, however, nor did the idea originate with myself. The first person whom I knew to avail himself of it was Mr. John Moran, of this city, who employed the principle many years ago in landscape work.

The apparent inconsistency in employing similar development in opposite cases vanishes, if we remember that the development is conditioned more by the exposure than by the nature of the subject. If this subject presents great contrasts, we may overcome these either in the exposure or the development. We may either try an average exposure followed by a strong development, or a prolonged exposure followed by a weak development. Both methods tend to diminish the contrast in the subject;

experience shows that the second is the most generally successful.

If, then, a weak development answers best for these two very opposite classes of combination, the question might at first be asked, then why ever use any other?

The answer is, that the use of this same treatment for the opposite conditions supposes that the difficulties of the subject have been controlled by the exposure. But circumstances may render this impossible. The subject may not admit of a long exposure; or in extreme cases, in landscape work, the contrasts may be so very great that the longest practicable exposure may not sufficiently reduce the contrast, and in these cases the stronger development needs to be resorted to.

If, however, a subject be selected in which there is a considerable but not an extravagant contrast, as where, let us say, that there are light colored objects brightly lighted, and darker colored objects in shadow, and if the experiment be made of giving this subject an exposure suited, to be followed by a twenty-grain developer, and if then a second trial be made, with a double exposure, followed by a development with a five-grain developer, it will be found that the latter negative will generally give the softest and richest print.

In making such a trial, or in employing this principle of weak development generally, it is to be remembered that the weak developer is not to be simply the strong developer diluted. The acetic acid is to bear the same relation as before to the quantity of developer, and not to the iron. The pint of developer is to contain the same number of ounces of acetic acid, whether the proportion of iron be large or small. This is essential, and a neglect to bear it in mind will injuriously affect the result obtained.

LEA'S MANUAL.

THE second edition of this work, much enlarged and improved, is ready, and we will mail it on receipt of price. Price, \$3.75. Please refer to the advertisement for a list of the contents.

GERMAN CORRESPONDENCE.

Discoloring of the Paper in Summer—American Magic Lantern and Stereos—Dry Plate Photography—On Sensitizers—Taking a Transparent Positive in the Camera.

THE summer season brings generally the question of the permanence of silvered paper on the tapis again. From the reports of the New York German Photographic Society, I learn with HORROR that you have already a heat of from 90 to 95 degrees Fahrenheit, and that silvered paper will turn yellow within twelve hours. These reports sound to us almost like a fable, for our season has so far been unusually wet and cold, and our summer is hardly anything more than a green winter, but our paper turns also, and this leads me to call again attention to the importance of employing *washed* silvered papers, which, according to my experience, will keep white for months.

Since three months no other paper has been used in the atelier of the Royal Academy in Berlin; the paper is sensitized on a bath containing eight per cent. of perfectly neutral nitrate of silver; it is washed immediately four times, and hung up to dry. In the printing-frame, the paper is backed by a pad filled with dry carbonate of ammonia, as has been explained in my former letters; the paper prints more rapidly, and the results are more brilliant than with ordinary albumen paper, and turning yellow is out of the question. I have kept the prints for a week before toning them, and still obtained excellent results. For the summer season, I cannot recommend anything better to prevent the coloring of the paper.

Lately another method to produce permanent sensitive paper has been recommended; the method is by no means new, for it can be found in my Handbook (American edition, page 163); it consists in the employment of citric acid.

The following is the formula :

Nitrate of Silver,	.	.	.	1 part.
Water,	.	.	.	12 parts.
Citric Acid,	.	.	.	1 part.
Alcohol,	.	.	.	"

It is best to dissolve the citric acid by

itself, in water, and to add it to the silver solution.

Paper prepared on such a bath does really keep white for a long time, but it is doubtful if these papers furnish as brilliant prints as the washed papers.

To the other means of keeping paper white, which are stated on page 162 of the Handbook, as, for instance, oil cloth or waxed paper, &c., I only refer here incidentally, but another question I have to mention yet; how is it that blue papers turn yellow slower than white or red? The color can hardly exercise an influence on the chemical change. The matter is, however, as easily explained as the influence of the blue color on linen; for blue furnishes, with the proper proportion of yellow, white, and the yellowish color of our linen appears whiter by a slight admixture of blue; in a similar manner does the blue in the colored albumen paper neutralize the yellow, which is produced by the decomposition of the silvered albumen paper.

I have examined with particular interest the beautiful magic lantern slides representing incidents of the Philadelphia Peace Festival, and for which I am indebted to Mr. William Bell of your city; not only the objects represented demanded my liveliest attention, but also the excellence of the execution could not fail to be admired. The magic lantern is, with us, a rare instrument, while in America it forms a handy auxiliary to the teacher and lecturer, and enables him to show to a large audience the most lifelike and truthful photographic representations. This interesting instrument is here mainly in the hands of showmen, who travel with it from town to town like a menagerie or a circus. This is much to be regretted; the magic lantern reveals the immense importance of photography for the education of the people. I have openly called attention to this fact, and cited the United States as an example worthy to be imitated, but my demand to appropriate forty thalers to procure the necessary apparatus for a college here, was refused.

I am sorry to say that the business in stereos is also going backwards. The splendid pictures of Lœscher & Petsch are nowhere

in less demand than in Germany. A strange indifference, while America almost daily furnishes novelties in this particular branch of our art. The Society for the Promotion of Photography received with unusual acclamation the brilliant stereos of artists' size, entitled the "Glories of the Yosemite," which, in the careful selection of the standpoint, and the excellence of the execution, have few rivals.

The dry plate question is, for landscape photography, of vital importance. As long as we aim for a new and reliable process, the question remains unsolved. The process of Mr. Carey Lea meets here with much favor. The landscapes which have been taken on plates prepared according to his method are undoubtedly amongst the best. I have obtained excellent results with it, but I prefer the gum preservative process of Wortley to the cochineal preservative process. Our friend Simpson will, no doubt, have reported to you the latest developments in England, where a number of experimenters are at work, and I will therefore not further enlarge upon this subject, but I must remark that I have not been able to produce plates which possess the sensitiveness claimed by Mr. Wortley. He states that his collodio-bromide dry plates are, with the same developer, as sensitive as wet plates. I have followed his formulæ exactly, and obtained, in spite of all my care, plates which required four times the exposure in order to yield a picture which was similar to a wet plate. I think that it is better to confess this openly instead of representing the sensitiveness greater than what it really is, for the latter will only produce erroneous impressions, and cause disappointment and a wrong criticism of an otherwise good process.

Partly induced by the agitation of the dry plate question, I have recently recommenced my investigations in regard to the sensitizers. Six years ago I demonstrated that all bodies which absorb iodine (*i. e.*, those which chemically combine with it), accelerate the change of the iodide of silver by light, or, which amounts to the same thing, increase its sensitiveness. To this class belong nitrate of silver, tannin, pyrogallie acid, and ferrocyanide of potassium.

The presence of these bodies exercises a favorable influence on the photographic plate; full advantage has been taken of this discovery. It is curious, however, that there are some iodine-absorbing substances which do *not* exercise this favorable influence, for instance, hyposulphite of soda and arseniate of soda. Iodide of silver when exposed with these does not appear more sensitive, but on the contrary apparently entirely insensitive, and it is the most surprising that with a suitably selected time of exposure, we receive in the camera with these substances a transparent positive instead of a negative picture. The circumstance is not explained; it has sometimes happened that a negative on being developed turned out to be a positive, and we have not been able to trace the causes. It has happened to me also, and the question is now, How can we explain it?

It is so abnormal, so paradoxical that that part of the picture should become darkest which has received the least light, that I must confess it, of all the strange things that I have met with in photography, this seems to be the strangest.

Now, however, I have found the solution of the problem in at least two special instances. If a diluted solution of arsenic is poured on an exposed and washed plate of iodide of silver (not bromo-iodide of silver), the power of development will be considerably lessened, but not entirely destroyed, for if the plate is washed it may be developed with iron and nitrate of silver solutions.

If the arsenic solution is kept for a long time on the plate, the iodide of silver in the places which have *not* been exposed to light will be converted into arseniate of silver. If the plate is now well washed and developed with sulphate of iron and silver, the developer will act on the places which have *not* been exposed to light; they become darkened, and the result is a positive picture. The experiment is in so far difficult as the plate is subjected to many washings, and the film is apt to tear. Further, the reaction of the arseniate of soda is alkaline, and this often causes foggingness. A hypo solution acts similar, but in not near so perfect a manner. I hope to be able to find other substances. The knowledge of the

causes of these phenomena will enable us to produce them in so perfect a manner that the process becomes of practical value, and we may be able to produce perfect transparencies directly in the camera.

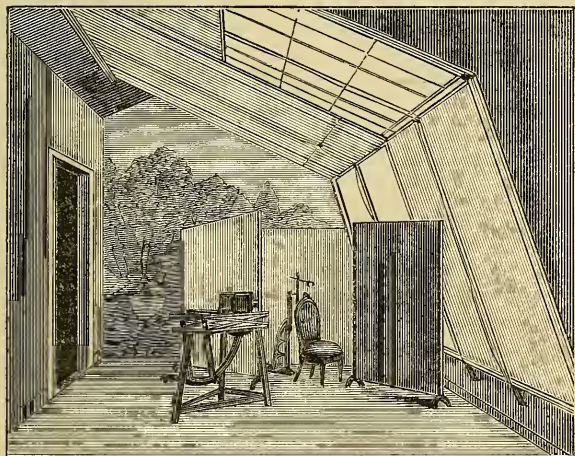
Yours truly,

DR. H. VOGEL.

OUR PICTURE.

WE are privileged to give our readers this month prints from negatives made by Mr. J. Landy, Cincinnati, O. Those who attended the Cleveland Exhibition will remember the sensation produced by Mr. Landy's original shadow pictures; grand as they were, he eclipsed them in his beautiful display at the Philadelphia Exhibition.

Mr. Landy seems to work with a boldness that is enviable, and he produces superior results. The subject of our present picture is Daniel Gano, Esq., of Cincinnati, of whom Mr. Landy writes: "He is one of the oldest natives of Cincinnati, seventy-eight years of age, and from the prominent position held during his life, and the public spirit he always manifested, is almost universally known and respected. He is facetiously called the 'last of the queues,' on account of his being still an adherent of the old times or 'old Grimes' custom of wearing his 'hair in a queue.'"



The negatives supplied us by Mr. Landy are admirable specimens of manipulation, and are in no degree retouched.

The drawing annexed is of the interior

of Mr. Landy's skylight, and the screens and accessories are shown in their position relatively as used in producing these shadow effects; soft and bold, without hardness. The dimensions of this studio are as follows: length 40 feet, width 25 feet, top and side-light, each 12 feet wide. The side-light reaches to within two feet, six inches of the floor, and stands at an angle of about 25 degrees, and is 10 feet high. The top-light is 20 feet long, and inclined at an angle of 40 degrees, as shown in the cut. A very good model, no doubt.

In speaking of his formula, Mr. Landy says: "The formula I work is the same as you have so often published, and which I have used for thirteen years or more.

Collodion.

Powers & Weightman's Ether,	1 ounce.
Alcohol, 95 per cent.,	1 ounce.
Iodide of Ammonium,	5 grains.
Bromide of Potassium,	2 "
Anthony's Cotton,	4 "

"I also have a solution with the above proportion of iodide and bromide, without cotton, for thinning in hot weather. I also have a strongly iodized solution for certain kinds of work. My bath is generally from 35 to 45 grains strong. Strong effects of light require very weak iodizing; formulas are played out; after making a few batches of collodion, you will soon see what's wanting. I believe in *cultivating the eye* so that you can tell when you have a good effect, without trying a plate to see if the shade is too deep, or the light too strong. Brains!"

The prints were made in Mr. Landy's "Square Medallion" style by Messrs. Dinmore & Wilson, 125 W. Baltimore Street, Baltimore, on Clemons's Albumen Paper. We think they commend themselves to every good printer and

toner, and are excellent for hot weather prints.

The beautiful mount was designed for this picture, and is such as your dealers are

now enabled to supply in beautiful tints from the manufactory of Messrs. A. M. Collins, Son & Co., Philadelphia. You cannot be too tasteful in your mounting boards.

NOTES IN AND OUT OF THE STUDIO.

BY G. WHARTON SIMPSON, M.A., F.S.A.

Effect of Light and Shade in Backgrounds on Intensity—Dr. Vogel's Handbook.

Effect of Light and Dark Backgrounds on Intensity.—I am always interested in reading the excellent dialogue lessons of Mr. Elbert Anderson. As practical instructions they are admirable, and the side issues which arise out of them are often full of suggestive matter. I was especially interested in his remarks a short time ago on the varying effect which dark and light backgrounds had on the intensity of the negative, because many years ago I had satisfied myself of the truth of the theory which he now propounds, as to the actual increase of intensity in the lights when a dark background is used. In such cases, there is comparatively little demand upon the free nitrate on the plate during development, and it is, therefore, liberally deposited on the lights, giving them an actually larger proportion of silver, and hence, greater intensity than they could have had if a light background or light draperies had been present, demanding a large share of the silver deposited during development. The presence of a dark background is, in fact, equivalent, in its effects on the lights, to the addition of a little more silver solution to the developer. At first sight many will be disposed to affirm that the increased brilliancy of the light in pictures with dark backgrounds and preponderance of dark draperies, is more apparent than real, and that the appearance of brilliancy is due to the effect of contrast, the class of pictures produced by M. Adam-Salomon being possibly instanced as illustrating this. The dark background and preponderance of masses of shadow in the draperies will be pointed out as manifestly giving, by contrast, an unusually intense effect to the lights. This is, to a large extent, undoubtedly true; skilfully managed,

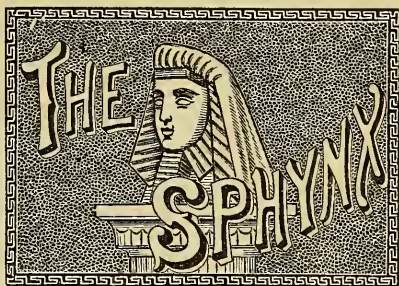
contrast is a very legitimate source of brilliancy, and the purity and intensity of a light can at any time be forced by placing it in juxtaposition with deep shadows or dark mass. But Mr. Anderson points out another cause, from which it will be seen that the lights in such a case not only seem to be more brilliant, but that they actually are more intense. In this, as I have said, I fully agree with him. I remember the circumstances which first called my attention to this fact in the early years of the collodion process. I was at the time in question taking some collodion positive portraits, and was struck with the low tone and general grayness of the lights when a white background was used, compared with the lights of pictures with dark backgrounds produced with the same chemicals, and under all the same circumstances, except the change of background. I noticed the fact that the white sheet which on a Daguerreotype plate gave a white background, on the collodion positive gave a dull thin deposit, which was far from white. This satisfied me that it was not simply the effect of contrast, and after some reflection and a few experiments, I learnt that it was due to the even deposit of silver in development, and the insufficiency in the quantity of silver present to give a dense deposit where so much white occurred. The continuation of development and addition of a few drops of silver—a very rare circumstance in glass positive work—gave the lacking intensity to the whites in the picture with a white background, and established the theory of the cause to which Mr. Anderson has referred.

It is a fortunate circumstance that the class of pictures in which the use of light backgrounds is most imperative, vignettes, least requires intensity or contrast, but is most suitably rendered by softness, delicacy, and harmony. It is also fortunate that when the presence of much dark drapery, and small portions of white or of a very light character occur in a subject, the operator has the matter somewhat under control. By using a strong developer, he can lessen the tendency to aggregation of deposit on the lights. The strong developer will quickly do its work, leaving little time for aggre-

gation, and will, at the same time, throw down on the half-shadows their full share of deposit, and so help to harmonize the tendency, otherwise inevitable, to crudeness, from excess of contrast.

Dr. Vogel's Handbook.—I fancy that I did, in my last notes, express my great satisfaction with *Dr. Vogel's Handbook*. Further examination only confirms my conviction not only as to its comprehensiveness, but as to its practical trustworthiness. It is a book which should find its way into every photographer's studio throughout the land. I am anticipating the arrival of a supply to recommend to English photographers. There is only one sentence in it to which I object, and that is not a photographic one. In the preface, *Dr. Vogel* refers to certain inventors or discoverers of modern arts, and mentions galvanoplasty as due to *Jacoby*. This is an error. The discovery of the whole system of electro-metallurgy is due to *Mr. Thomas Spencer*, then of *Liverpool*, and whom I am proud to call my intimate friend. Its discovery was coeval with the discovery of photography; both were announced in 1839. *Mr. Spencer* published his discovery in that year, whilst *Jacoby* published nothing on the subject until 1840. It is all written in the chronicles of the science, and I have before me an account of a presentation to *Mr. Spencer* of a purse of five hundred guineas and a gold watch as the discoverer. Great men are rarely egotistic or obtrusive, and *Mr. Spencer* rarely thrusts himself forward in the matter. But mankind are concerned in conserving the fame of benefactors of the race. The people of the United States have just honored themselves in recognizing the claims of *Morse* by a statue, and this has suggested to me this brief reclamation for my friend and countryman.

THE *Table of Weights*, presented to our readers with our June number, failed to reach some of our subscribers. We shall be glad to present them with other copies if they will be pleased to ask for them, as we have a few of them left.



Answers to Queries in April and May Sphinx.

6. (April.) Dirty glass is most generally the cause; but in many instances short exposures require the development to be pushed as long as possible, the acidity of which causes the film to leave the glass, which, when dry, splits from the contractibility of the collodion.

Remedy.—Use a more porous collodion; or, after fixing and washing, pour over the negative a solution of gum arabic in water, one ounce of gum to eight ounces of water.

7. (April.) To make "sticking paper" use

Gum Arabic, . . .	2 ounces.
Water, . . .	4 "
White Sugar, . . .	½ "
Carbolic Acid, . . .	1 drop.

Dissolve in warm water, and filter through flannel.

1. (May.) For salting plain paper:

Chlo. Ammonium, . . .	160 grains.
Water, . . .	1 quart.

Have sufficient solution to draw the paper completely through with one steady sweep, and hang up with tacks or clothes-pins to dry. To sensitize, float on same bath as albumen paper, only about half as long. Don't bother with the old ammonio-nitrate silver solution, or any brushing-on process. There is nothing more simple or reliable than the above. Years of practice have never known a failure.—R. V.

Ditto. A good formula is as follows:

Salting Solution.

Water, . . .	128 ounces.
Chloride Ammonium, . . .	240 grains.
Citrate Soda, . . .	10 "

Dissolve the salts in the water, and immerse the paper in it for a minute. Take out, and hang up to dry.

Silvering Solution.

Water, 11 ounces.
Nitrate Silver, 1 ounce.

Dissolve the silver in the water, and take 4 ounces from the bulk; precipitate and redissolve it with ammonia, then add to it the remaining 7 ounces. Allow the resulting precipitate to subside. It can then be filtered for use.

2. (May.) One is as good as the other. In former times, before collodion was bromized, iodide of potassium was used almost exclusively in collodion; hence the fashion.

Note.—Some of the readers of *Sphinx* have urged us to give questions and answers in the same number. We can very well do so, but it will destroy one of the intentions we had in instituting the *Sphinx* column. Our hope was, by this means to bring out answers from *operators* themselves. We want to get our men who are in daily practice to tell us what they know.

To try to please *all*, however, hereafter

we will answer *some* of the queries, and the others we shall ask others to answer.

Queries.

1. Why do prints have a slimy appearance when dry, and how may I prevent it?—W.

2. Why does albumen paper look cracked and "woolly" when finished?—J. P. M.

3. Why do my collodion films dry crapy and in streaks in warm weather?—J. T. MATHIS.

4. In boiling a negative bath, how much of the solution should be boiled away?

Are chloride of gold and the iodides of potassium and cadmium affected by light?—IGNORAMUS.

5. My skylight and side-light face the northeast; ceiling of gallery, 9½ feet high; highest part of skylight, 14 feet long and 15 feet from the floor, running down to top of side-light, which is the same as the ceiling. The sun *pours* down into the room. How can I keep it out?

Editor's Table.

THE *Photographic World* for July (No. 7) contains a specimen of "country work" by Mr. W. H. Jacoby, Minneapolis, Minn., and the following articles, some of which are very valuable. Photography Abroad; Chemical and Mechanical Changes produced by Light on the Silver Haloid Salts; The Importance of Dress in Portrait Photography; The Masking of Negatives (a new dodge by Fritz Luckhardt); Photography in Germany, by Dr. Vogel; Notes In and Out of the Studio, by G. Wharton Simpson, A.M., Concentrated Iron Solutions, Hydrate of Chloral, Sensitive Paper for Development Printing, Preservation of Sensitive Paper, Strength of Toning Baths, A New Dry Process, Death of Sir John Herschel, Large Photographs, Copper in the Iron Developer; On Various Photographic Subjects, by M. Carey Lea; On Improving Negatives; Strong and Weak Printing Bath; Obtaining Great Heat with Ordinary Coal Gas; Splitting of the Film; On Photographing the Magnetic Spectra; From a Lady Photographer; Splashes of Silver; Hypo Club; Discussion on Negative

Manipulation; The Background; How to Make a Background; The Ferrotypers' Association; "How I went to the Convention, and what I saw," by Elbert Anderson; Photography for Boys; The Preservation of Sensitized Paper; Position and Composition; How to Use an Alkaline Bath; Correspondence; Trimming and Mounting Stereographs; Composing an Historical Photograph; Our Picture; All the World Over; Table Talk, and Editorial.

Price, 50 cents per copy; \$2 for six months to subscribers of this journal.

THE *Photographic World* is winning golden opinions and many new friends monthly. The perusal of its contents each month at the head of this (Editor's Table) department, will show our readers that we are sparing neither labor or expense to make the *World* as good and as useful as its older brother. We thank our readers for the encouragement they are giving it, and we now assure them that it is to revolve *permanently*. No one can afford to be without it in

these great growing days of our art. We can supply the *World* from the first number.

BUSINESS NOTICE.—A year or more ago we promised our readers that as soon as their patronage would warrant it, we were willing to devote our whole time to their interests. We are glad to say to them now that the rapidly swelling subscription list of the *Philadelphia Photographer*, and the overwhelming and flattering encouragement given by them to the *World*, have brought that hoped for time to hand, and we are now *yours*. On the first of January last, our interest in the stock business expired. We did not renew it, but sold out to our former copartners. We thus severed a bond which was pleasant, and to one whose means and hopes are small, a profitable one. But having faith in the desire of American photographers for good photographic literature, we took the step we have taken, hoping for the best. No public announcement of the fact was made at the time, for we were not sure that the step was a wise one, and we did not know but we should be driven back to the dividing of our time between two widely different interests.

We now feel that we have made no mistake, and trust that our good patrons will continue to appreciate our motives in devoting our time to them.

The demands upon our time for your interests were so great that we were compelled to make the arrangements we have done.

We are not going to make a long list of promises to be broken hereafter. Our actions shall speak for us. Whatever is of interest or value to our readers, if money or hard work can procure it, they shall have it. We now have the best talent in the world on our staff, and shall add to it whenever your interests require it. As we now belong to the fraternity of practical photographers, their interests are ours, and we hope they will reciprocate.

HAVE you read Dr. Vogel's Handbook?

THE *Photographic Record* still supplied; five copies for 25 cents.

MR. B. W. KILBURN has made some elegant views in the White Mountains lately; also in the Au Sable Chasm, and at Saratoga.

MESSRS. PORTER & WINTER have just opened a new and beautiful photographic palace in Cincinnati. We wish them good success.

We regret to record the sudden death, a few days ago, of Mr. David Weaver, a promising young man engaged with Mr. Jno. R. Clemons in the manufacture of albumen paper. He was beloved by all who knew him, and is a real loss to photography.

MR. A. H. PLECKER, Salem, Va., has sent us a variety of pictures with ornamental medallion borders, similar to those by Mr. Gihon in our last number. Some are very near to Mr. Gihon's, and show that Mr. Plecker knows how; but do not, we beg, run the thing in the ground by using all sorts and any kind of designs, obtrusive and ugly. Nothing should be used that will make the portrait subordinate. Use mild designs, such as will be the last thing noticed.

"HYPO DUST" wants to be "taken inside" on making collodio-chloride, as he cannot make it good. We refer him to Mr. Fennemore's excellent article on page 50, Vol. VI, *Philadelphia Photographer*, February, 1869, and to Mr. Schreiber's paper, read recently before the Pennsylvania Photographic Association. If they do not supply his wants, he will favor us by detailing his troubles, and we will endeavor to bring him still further "inside."

MR. R. J. CHUTE, whose excellent paper read before the N. P. A. was published in our July number, gives us another valuable paper this month. Mr. Chute is one of our most intelligent and progressive photographers, and knows well how to teach. Moreover, he does it willingly. He is well known in Boston, where he conducted business for himself and others several years. He is now Secretary of the Pennsylvania Photographic Association, and chief operator in the establishment of Mr. F. Gutekunst, Philadelphia.

OUR MODEL SKYLIGHT.—In order to give those attending the meetings of the N. P. A. an opportunity of seeing how some of the best skylights in the country are constructed, and to show how they may be worked, we employed Mr. J. C. Harmon, of this city, to construct us a model, which we placed in the meeting-room of the Association. Messrs. A. K. P. Trask and R. J. Chute assisted us in planning it, and Mr. Trask's remarks upon it, with a drawing of the model, will be found in this number. We supplied it at our own expense, and are now willing to sell it. It is well made, and could readily be adapted to many buildings. Full particulars and price on application.

“READ YOUR JOURNALS ; SAVE YOUR MONEY.”

This is the sentiment expressed in a letter we have received from Mr. L. Rombach, printer for Messrs. Hoag & Co., Cincinnati, Ohio. He says :

“In the last *Photographer* you again caution us against a secret process. This time it is ‘How to obtain white prints for fifteen dollars.’ Please find inclosed prints made when the thermometer was at 99° in the shade. Paper kept seven hours between silvering and toning. If Mr. What’s-his-name can make whiter prints with his process, he is welcome to my fifteen dollars. The prints were made by the simplest receipts, published time and again in our journal and *World*. I hardly feel inclined to send the price of three years’ subscription to the *Photographer* until I know more about it.”

We do not see how vignette prints can be more beautifully white than those sent us by Mr. Rombach. They are very fine, and exquisitely toned. We congratulate him on his good printing, and on his good sense. We shall publish his formula.

“To My PATRONS.”—Now the Fall trade is approaching, it behooves the photographers to prepare for it, and to use every means proper to secure their share of the business.

Your contemporary is sure to get ahead of you, unless you are wide awake. Moreover, your customers will endeavor to override you, and dictate to you, unless you are careful to instruct them in what you expect of them in your studio.

This latter matter may be fully attended to in a cheap way by the circulation of “*To My Patrons*,” a neat little pamphlet we have prepared for photographers to give to their customers.

We have already supplied over 50,000 copies of it to those enterprising photographers who are quick to see its advantages, and if the profession would circulate it *generally*, we believe our art and its followers would be respected more and patronized more. Probably the character of the work may be better understood if we make some extracts from it, as follows :

INTRODUCTION.

The intention of this little book is to say a few words in a kindly way to those who have photographs taken, in order that the intercourse between them and their photographer may be pleasant, and result in the most successful pictures. People who desire pictures, generally seem unwilling to give the necessary time to secure good ones. As time is precious, therefore, we publish this that you may be informed

beforehand on certain points, a knowledge of which will *save time*. Please peruse what follows carefully.

CHAPTER I.

PHOTOGRAPHY

Is not a branch of mechanics, whereby a quantity of material is thrown into a hopper, and with the grinding of grim, greasy machinery, beautiful portraits may be turned out. The day when a daub of black and a patch of white pass for a photograph, you are well aware, is ended; for you will not receive such abominations yourself as likenesses of those near and dear to you, and especially of the one dearer to you than any one else, namely, your own dear self.

To produce pictures different from these requires skill, good taste, culture, much study and practice, to say nothing of an expensive outfit, and a properly arranged studio. With all these the photographer must know how to manage a most obstreperous class of chemicals, fickle as the wind, and, therefore, he needs all the assistance *from you* that you are able to give him in the sundry ways explained further on. He is entitled to the same respect and consideration from you as your minister, your physician, or your lawyer, and it is just as essential that he should have *rules* for the best government of his establishment as it is for any one else whom you patronize, consequently you should be quite as unwilling to trespass upon such reasonable regulations as he may make as you would to apply a fly-blisten when your physician orders you to *take* soothing syrup. Remember, then, that it is *he* who takes the picture and not you; that it is *he* whom you hold responsible for the result and not yourself; that it is *he* who knows best (or ought to) *how* to take it, and not you, and that *his* reputation suffers if he fails, and not yours. For the sake of a good result, then, try to submit to the suggestions of your photographer. We guarantee satisfaction.

Then follow chapters on *When to Come, How to Come, How to Dress, How to Behave, The Children, Business, Frames, Copying, Coloring, and Prices*.

The whole is ornamentally printed in type the size of the above, and on various colored tinted papers. It is the cheapest and best method of instructing your customers and advertising that you can adopt, and is *not* a re-hash of our article on “Things You Ought to Know,” given in the first volume of this magazine, in 1864.

Just as we go to press we are in receipt of a letter from the venerable Prof. S. F. B. Morse, wherein he says :

“I take down with me to-day, on my way to Boston, the remains of the first photographic instrument ever made and used in this country; and I shall deposit them with my friend Mr. A. Bogardus.”

This is good news, and the members of the National Photographic Association will in due season receive the promised copies.



KENILWORTH CASTLE.

ALEX. WILSON.

LEAMINGTON.

T H E

Philadelphia Photographer.

Vol. VIII.

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PHOTOGRAPHIC PRINTING ON OIL SURFACES.

BY H. H. SNELLING.

I AM not aware that a satisfactory process for printing on oil surfaces has ever been given to the photographic public, serious objections being made to all I have seen. It is, also, so long since I experimented for the purpose of obtaining such a process, and adopted the one herein given, that some one else may have made a similar discovery; still, knowing this to be a good method, I send it, and I trust, Mr. Editor, that its excellence will make up for its brevity as my monthly contribution to your valuable journal, particularly as the severe labor to which I am now otherwise subjected prevents as free scope to my thoughts as I desire when writing. And just now, there is another reason.

I like best to sit down and scratch away as rapidly as my hand can go, and finish before I rise from the desk, but under present circumstances, my mind is dwelling too much on something, which time will disclose, to come to a point on any other subject. When you are made acquainted with this one "all absorbing idea," you will say, I trust, "All right." But to the process.

Make a saturated solution of gum dammar in equal parts of alcohol (95°), and sulphuric ether (conet.)

It is necessary to make a saturated solution, because, *first*, even this strength is not very strong, and, *secondly*, because as weak as it is, the varying quantity of oil in different surfaces require a thinner or thicker film, as the oil is more or less predominant; therefore, an eight or twelve-ounce bottleful of the varnish may be made as above, and diluted with the same solvent before using, as may be required. The experience of the photographer must teach him as to the thickness of the film necessary to a given quality of canvas, or other oiled material.

Having prepared the varnish, it is used by flowing it quickly over the surface, in the same manner observed in coating a plate of glass with the collodion film.

Either the ammonio-nitrate or developing process may be used in printing on this prepared surface, in the solar camera, or by superposition; but if the first process is adopted, the solution must be salted as lightly as possible before spreading the varnish; or, perhaps it can be salted after it is spread, but I have not tried it so.

The superiority of this method over those that I am acquainted with is, that the film remains soft, never cracks, either before or after painting, and it does not injure the canvas in any way, while, it seems to me, it makes the colors more brilliant.

I have had two or three specimens of this style of printing "knocking around," and

if I can find one I will send it to you for examination.

I may also mention that I have taken "printing paper," like that used for your journal, and even a very common quality, and made quite good photographic prints upon it, after sizing it with this varnish; and I am of the opinion that paper well sized with it, and rolled heavily, would receive photographic impressions equal to albumen paper in solidity, and more artistic in appearance.

THE USE OF ALBUMEN AS A SUBSTRATUM.

BY CHARLES WAGER HULL.

It is now quite the habit of photographers, indeed, has long been the general rule of our craft, to use albumen upon the photographic plate, generally to render fit for use the too often imperfect glass used for negative work; an easy way to make dirty glass clean.

To those who may not have used it, it may be well to state how the solution of egg is generally prepared, and how it is most commonly applied to the plate.

To one ounce of albumen, or near enough, the white of one egg, add about twenty fluid ounces of water and five to ten drops ammonia conc., shake thoroughly and filter. After the plate has been passed through acidified water, well rubbed with clean rag and washed under a faucet of running water, apply while still wet the albumen by flowing as you would the collodion; avoid bubbles; dry spontaneously in a room free from dust. It was not my intention to have written directions as to preparation, but rather to write of effects good as well as bad; however, it may be new to some, so let it pass. As a substratum, it has the advantage of affording an easy and effectual means of preparing plates for the reception of the collodion film, and of holding the same firmly in its place under almost all conditions; these are its principal advantages, probably all. It has the very considerable drawback of interfering with the bath, making it necessary to boil, filter or sun it more often than before as the practice of the operator may be.

Its action upon wet and dry plates comparatively speaking, is the point to which I

wish to call especial attention; more particularly to its action upon the last named—dry plates.

Some years since I spoke at the meeting of the Photographic Section of the American Institute upon this point, asserting that its use for such *very materially* increased the time required for exposure; nearly if not quite doubling the same; which was disputed by all present, if my memory serves me, with the single exception of Mr. L. N. Rutherford. I was so convinced at that time of the truth of my position, that I discontinued its use as a coating for plates, only using it as an edging; in which way I have continued to use it ever since with the following exceptions.

Wishing lately to prepare a few tannin plates to be used early the next morning, and not knowing of my wants until late in the evening—more than all being lazily inclined—I coated and prepared upon my usual formula some half dozen, using plates which had been albumenized for use by the wet process. The next day I started to make the views that I desired, taking the half dozen plates along. I exposed three, giving the time usually given, some sixty to ninety seconds, and returned home to develop, when to my astonishment little or nothing was to be found upon my plates; they were weak and under-exposed, like a miserable ambrotype.

I decided at once that my trouble was due to the substratum of albumen, so I put off again with the remaining three plates, which I exposed respectively one, two, and three minutes; the only really good one was the three minute picture.

Determined to test it more positively, I, the following evening, prepared six plates as follows: Two with the albumen coating, four with edging of albumen, through the centre of two of these four I wrote with the point of a stick my name in large bold letters. When these plates were exposed the following day, all at the same time and upon the same view, my conclusions were fully proven; those with the albumen coating taking quite double the time of those edged with the same, and those with the word Charles written on the face were good, well worked, and sufficiently intense in all parts not covered by

the letters of my name; here the image was weak, not nearly worked out, and poor to the last degree. I am therefore fully convinced that albumen is a poor thing to put on tannin dry plates. All this may be as old as the hills, possibly it is; however, I send it to you for the reason that I never remember having seen it in print.

If these facts strike any reader as curious, will not another and quite opposite one—its action upon wet plates—appear as very strange?

To make a long story short, the same experiments with wet plates prove these facts: 1st. Increase of time for exposure, probably one-half more. 2d. A *decided increase of intensity*; wherever the letters of my name appeared upon the wet plate, there it was more bold and stronger, the opposite of its action upon dry plates. Of this simple matter I have made quite a long story; my only excuse is, that the use of albumen for dry plate work has become so general, and my facts so opposed to common belief, that I think a statement somewhat detailed is required.

A Printing Process that will not Discolor the Paper.*

BY S. ROMBACH.

In complying with your request to give you the formula by which the prints that I sent you were made, I will only be giving you a process that is very well known to the readers of the *Photographer and World*. *The best formula in the world, in careless hands, will give but indifferent results.* I find no trouble in turning out clean white prints, in the hottest weather, with the following formula:

SILVER SOLUTION.

Silver,	4 ounces.
Water,	32 "

Use the silver solution neutral. Float from half a minute to one and a half min-

* In our last number we noticed some prints by the author of this article as being particularly free from discoloration, and he now, without pretending to say anything new, tells how he succeeds in producing the best of prints.—[Ed. P. P.]

utes, according to the temperature of the weather. Draw the paper from the solutions across a glass rod fastened on the edge of the silvering dish. Place it in a book of blotting-paper (newspaper), rub well, change the paper to another part of the book three or four times, then hang it up to dry. When thoroughly dry fume for about eight or ten minutes.

STOCK GOLD SOLUTION.

Dental Gold,	20 grains.
(Dissolved in two parts Muratic and one part Com. Nitric Acid.)	
Water,	16 ounces.

Neutralize with scraped chalk. An excess of chalk will do no harm.

TONING SOLUTION.

(For six sheets of paper.)

One ounce Gold Solution to one quart Water.	
Bicarbonate Soda,	10 grains.
Salt,	15 grains.

It can be used as soon as made, and any tone can be produced. Wash the print ten minutes before toning in two or three waters.

Fix in hypo twenty ounces, water one gallon, for from eight to ten minutes. If the paper is inclined to blister, pass it through a solution of salt after fixing. Wash thoroughly.

THE STEREOGRAPH.

BY PROF. J. TOWLER, M.D.

THE stereograph consists of two apparently similar pictures, about two inches and a half square, mounted side by side on the same card. We say these pictures are apparently similar, from which expression the reader will naturally imply that in reality they are not similar, and he will then examine them very minutely, hoping to discover some difference, some divergence of some kind, or some secret in the construction; but the examination will be futile, as long as it consists in simple observation, for the eye can scarcely discover the difference by reason of its minuteness.

There is, however, a very important difference between the two stereoscopic constituents of a stereograph, and this difference is the very cause of stereoscopicity; for without it the two pictures cannot produce the effect of solidity in vision.

The object of the stereograph is to produce a *solid* picture by means of two flat pictures; that is, a picture in space endowed with the three items, length, breadth, and thickness, that constitute solidity. The result is one of the most pleasing as well as one of the wonderful in the science of optics.

The length, breadth, and thickness are the components of the *difference* above mentioned, and are subject to the laws of geometry; they are consequently capable of accurate demonstration. The difference in question is entirely under our control, which means that one of the items may be changed whilst the two others may remain unchanged. From this it may be inferred that we have it in our power so to arrange this difference as to expand the object represented in the solid picture, either latitudinally or longitudinally; and again, from this expression, the inference may be drawn that we have it in our power to make a stereograph that shall represent an object *naturally* or *unnaturally*; naturally, for instance, such as the eyes would behold it if it were really an object; unnaturally, such as the untutored or incipient artist sometimes represents an object, either too much widened or too much deepened.

This difference being capable of mathematical demonstration, subject to the laws of geometry and trigonometry, and at the same time under our control, it might be supposed that the artist has it in his power to compose a stereograph. Theoretically this is a correct supposition; that is, an artist can compose a stereograph. Practically, the composition of a stereograph representing a landscape, with all its multifarious objects, although a possible feat, would be a labor of vanity more than of utility. Single objects, however, especially if their forms are geometrical, are easily drawn with the hand in such a manner as to represent a solid picture, by the superimposition of two single pictures possessing the requisite difference and mounted side by side. Indeed, the *first* stereographs were constructed by the hand; their effects were charming.

It now becomes our duty to explain what this difference, about which we have been

speaking, consists in; how it is produced, what its nature when it produces distortion, and what its limits to avoid distortion.

Secondly, to explain by what means two pictures, endowed with this essential difference, can be viewed so as to produce a solid picture.

Place yourself in front of a window, about three feet from it, and make a mark on one of the panes with black paint or color; now select some point on a tree or plant not far from the window (four or five feet), and get into a position so that the point on the tree coincides in position with the black mark on the pane of glass when viewed by the right eye alone; keep the head fixed in this position, close the right eye and open the left; the point on the tree no longer coincides with the black mark on the pane of glass, but is seen an inch or two to the left of it. This shows distinctly that the two eyes see objects respectively in different position and has each an independent picture. Let an assistant mark the position, on the pane of glass, of the object as seen by the left eye. You have now two marks on the glass, and we will suppose their distance apart to be two inches.

Select now a mark on the brick wall on the opposite side of the street, the head remaining in the same position as before, so that when seen by the right eye, this mark shall coincide with the first black mark on the pane of glass; close the right eye and open the left: the object as now seen by the left eye, on the pane of glass, will be nearer to the original black mark than the preceding object. This experiment not only shows that each eye has an independent picture of each object, but it proves that the *more distant* the object is removed from the eyes the *shorter* will be the distance of the corresponding pictures on the pane of glass. This is true for all objects, far and near; that is, the right-eye picture and the left-eye picture of the nearest object on a pane of glass will have the greatest distance apart, whilst those of the most distant object will be the closest together, and even may coincide, and do so, mathematically speaking, while the object is at an infinite distance. It is thus seen that the farther an object is removed from the eyes the less

is the distance apart between the right-eye picture and the left-eye picture, and that this difference varies apparently inversely as the distance of the object from the eye. This is not the exact mathematical expression for the difference, but for common explanation it suits the purpose well enough; the exact variation is distinctly known, and from this knowledge and the microscopical measurement of distances of corresponding points on a stereograph, we are enabled to calculate the distances of objects, not alone from the observer himself, but between each other.

For military purposes, that is, to ascertain the distances apart of all the objects in a landscape, nothing, theoretically speaking, is equal to a stereograph taken with a given lens and at a given distance from a given object. In practice, the difficulty lies in obtaining expressions for the minute differences in question. This difficulty, I think, can be overcome.

The reader will easily perceive that the difference of distance between the right-eye picture and the left-eye picture depends entirely on the distance between the two eyes, for if the two eyes were located in the same orb, so as to form but one eye, there could not possibly be any difference, and if there is no difference there can be no depth or distance between the objects in a picture, and consequently there can be no solidity. Furthermore it is evident that eyes that are more widely apart than ordinary will produce pictures of objects on the pane of glass more widely apart.

From this we learn, firstly, that each pair of eyes has its corresponding distances; and secondly, that in order to produce accurate stereoscopicity for a given pair of eyes, the photographic lenses must be placed apart at a distance *exactly* the same as that which exists between the centres of the two eyes; and thirdly, that distortion will be the result arising from differences either greater or less than those corresponding to the distances of the eyes apart.

The limits, therefore, or the range of distance between the photographic lenses employed for taking stereoscopic pictures, depends evidently on the range between the widest eyes and the nearest eyes; the largest

distance will scarcely equal three inches, and the smallest seldom less than two inches in adults. Now if the distance between the lenses is kept within these limits, the distortion will be so trifling as scarcely to be observable by eyes whose distance apart is the most opposite to that of the lenses. The best effects are produced, as may be inferred from what has already been observed, when the distance between the lenses and the eyes is exactly the same; and *vice versa*, the greatest distortion is the result of the greatest divergence from this law. Not only is this the case, but there is a difficulty in superimposing two pictures that have been taken by lenses either too near together or too far apart, which strains the eyes and produces pain.

Two pictures, endowed with the essential difference in question, can be viewed in such a way as to produce the effect of solidity either by means of the unaided eyes, or by aid of a stereoscope.

The stereograph for the eyes alone is mounted differently from that for the stereoscope; that is, the right-eye picture is mounted on the left side, and the left-eye picture on the right side. Viewed in either way, the two flat pictures are seen independently by either eye, and *shoved out* of their position laterally so that the two inside pictures overlap each other; but these two pictures correspond to the right-eye picture and the left-eye picture, whilst the two outside pictures, also a right-eye picture and a left-eye picture, stand apart and alone.

The shoving on one side so as to produce superimposition of the two middle pictures is effected in two different ways by the two different means employed: thus with the naked eyes, it is effected by *squinting* internally slightly; and by means of the lenses of the stereoscope it is effected by *refraction*.

In either case, that is, where superimposition is produced, it is natural that the rays of light from the corresponding points must cross each other; and where rays of light do cross or intersect, there is an intensification of light, a focus; and where there is a focus, there we have a picture.

Now, as the distances between the respective corresponding points are not the same (those in the foreground being the largest),

it is easy to see that the rays will cross each at different distances from the eyes, corresponding in ratio exactly with the distances between the respective corresponding points on the two pictures; these focal points consequently will not be on the same plane but in space, giving rise to a *solid picture*, endowed with all the ratios of depth, breadth, and thickness of the original, from which the photographs were taken.

This solid picture is produced either by squinting or by the refractive power of the two lenses in the space *in front of the eyes*, and it is now a miniature representation of the original, and is viewed as an independent solid object would be, if placed in its position and of its size. The truth of this philosophy of the subject can be proved by constructing a solid of the original, by placing a strabonic* stereograph perpendicular to a plane at a distance of about twelve inches from a stereographic mount, also perpendicular to the same plane and parallel to the stereograph. Opposite the middle of each picture of the stereograph, make a pinhole through the plain mount.

If fine threads be stretched from each corresponding point in either component of the stereograph to either pinhole, these threads will intersect, and the intersection will represent the respective focal points, which will be found scattered over space and not in the same plane. If these intersections are connected by lines, and the lines filled in with surfaces, a solid will be produced simulating in miniature, with the utmost exactness, the original object of the stereograph.

(To be continued.)

GUN-COTTON AND COLLODION.

THEIR DISCOVERY AND HISTORY.

As stated in my introduction, the positive impression is made upon glass, or some other material coated with collodion. It is generally known that collodion is made chiefly with gun-cotton. It is not unusual for heliographers to procure their collodion or gun-cotton in a state ready for use. As

* Stereograph mounted for the squinting operation.

this, however, may be out of their power, it is very desirable that they should be practically familiar with the details of the preparation of both. In this chapter, I shall present an authentic account of the discovery and history of gun-cotton and collodion.

Who, then, discovered the first of these? Perhaps the first chemist who investigated the results of the action of chemical substances upon ligneous matter was Braconnot, a French chemist, who, in 1833, discovered that cotton, linen, and starch might be converted into readily combustible and soluble substances. In 1838, Pelouze, another of those laborious workers in the great field of science, to whom practical men in every department of industry owe so much, by treating cotton, wool, paper, and hemp with nitric acid, produced explosive substances similar to gun-cotton. This was made by Schönbein, a professor in one of the Swiss universities, in 1845; he, however, kept his process a secret, until soon afterwards, the discovery was announced by Dr. Fr. Jul. Otto, a German professor of Caroline College, Brunswick. The several steps in this discovery have doubtless been the subjects of separate original investigations, and the claim of no single chemist would pass unchallenged to the honor of discovering the process for making explosive cotton, and its conversion into a solution in ether and alcohol.

An examination of the scientific journals on the continent of Europe might find many a savant preferring the claim to this important discovery. As one example, we may mention Professor Böttger, of Frankfurt-on-the-Main. Pithily sings the bard,

"Seven cities claimed the birth of Homer, dead,
Through which the living Homer begged his bread;"

a claim even yet in abeyance.

Whether the assumed discoverers of gun-cotton will ultimately be included within the same category with the father of the epopee, I am not prophet enough to fore-show. It is, however, sufficiently manifest that, with our present lights, the honor of the discovery must remain in doubt.

Much of the same uncertainty hangs over the discovery and first production of collodion.

Despite what the foreign authorities say in behalf of Schönbein's claim, the probabilities are strong that Dr. Josiah Curtis, then of Boston, made the discovery early in 1846. The following letter from Dr. Curtis states the facts of the case:

"CUYLER HOSPITAL, GERMANTOWN, PHILA.,
October 26th, 1863.

"M. A. Root, Esq.

"SIR: In reply to your letter, I would say that I made collodion, while experimenting in the manufacture of gun-cotton, at Lowell, Mass., in September or October, 1846. I never heard of its being manufactured by, or even known to, any except those to whom I spoke on the subject, till 1847.

"The name, Collodion, originated with Dr. John K. Palmer, who is now employed in the laboratory of Dr. Thayer, of Cambridge, Mass. The application of this name, however, did not occur till some months after I had produced the article, and not until a Mr. Maynard, of Boston, had commenced exposing it in the shops for sale, under the title of 'Liquid Adhesive Plaster,' a title which he relinquished only after considerable opposition.

"Dr. Palmer, looking, one day, over a Greek lexicon, in the office of Dr. A. A. Gould, decided upon the name Collodion, and by this the article has been known ever since.

"Yours, truly,

"JOSIAH CURTIS,

"Surgeon U. S. Army."

Collodion was doubtless "discovered" by other experimenters elsewhere, but, like every other discovery which has no apparent practical value, passed into the arcana of unavailable, and hence valueless, facts, until it was recommended as an adhesive substance adapted to the wants of the surgeon, in an article in the "Boston Medical and Surgical Journal," under date of March 22d, 1848, by S. L. Bigelow. He stated that he had accidentally discovered its remarkable adaptation to the rapid union of wounds by the first intention, and had proved its efficacy by numerous other experiments. The next number of the same journal, issued one week later, contained an article on the same subject, by John P. May-

nard, of Dedham, Mass., in which he claims to have been the first to use the preparation as an adhesive plaster, and proceeds to detail its advantages, as attested by numerous physicians and surgeons in Boston.

Both these young gentlemen were either students or recent graduates of medicine in Harvard University, and the idea of applying the solution to this use is said to have been broached in conversation between them while employing it as a varnish for dried anatomical preparations.

Collodion was now introduced as an article of commerce among the apothecaries, being prepared in Boston by a secret process. The first published formula for its preparation was from the pen of Mr. Edward Parrish, a pharmacist of Philadelphia, who, jointly with his assistant, W. W. D. Livermore, then devised the process with mixed nitric and sulphuric acids, which, with slight modifications, has continued to give satisfaction to this time, and is substantially that now most approved by some of the leading manufacturers. This article was published in the *American Journal of Pharmacy* for July, 1848.

Other essays soon appeared on the subject in our own and foreign journals, among which, that of M. Mialhe, a French pharmacien, recommending the immersion of cotton in a mixture of nitrate of potassa and sulphuric acid, found favor with the committee of revision of the United States Pharmacopœia for 1850.

In the fourth number of the *American Journal of Pharmacy*, 1849, Mr. Parrish published the result of some further experiments upon the new adhesive solution, which soon excited the earnest attention of experimenters in America and in Europe. Perhaps no other subject claimed so large a share of the current literature of pharmacy during some years, and on its introduction into heliography, collodion assumed great importance as a branch of business.

An important improvement in this manufacture, suggested by Mr. Livermore, and announced by Mr. Parrish in the Philadelphia College of Pharmacy before it was made the subject of a patent by Mr. Cutting, is thus described in Mr. Parrish's treatise on Pharmacy, which also contains an elab-

orate account of this substance. After washing the cotton with water, instead of drying it at great risk of an explosion, "drain off the water by pressure, and then macerate the cotton a few minutes in alcohol, which, by its affinity for the water, rapidly extracts it, and then may be sufficiently separated by expression, as it is not incompatible with the ethereal solution, which, in fact, it improves."

But who first employed collodion in our art?

To this query I can reply that, within my personal knowledge, Charles S. Rand, Esq., of Philadelphia, in 1848, suggested to F. Langenheim the use of collodion in place of albumen, in producing sun-pictures. Mr. Rand prepared a quantity of collodion, which Mr. Langenheim tried, but without success.

The cause of his failure was, most probably, the excessive *thickness* of the material employed, it having been of precisely the same consistence as when applied for surgical purposes. Why the experiment was not repeated, I am unable to say. At all events, Frederick Scott Archer, the English photographer, and Le Gray, the French photographer, are now generally accredited as the first to lay down reliable formulas, and employ collodion successfully for heliographic purposes.

Archer gave his process to the public two years subsequent to this application of it in Philadelphia. Dr. Charles M. Cresson,* an investigating amateur, is believed to have been the first American who produced good specimens of collodion portraits from life. This he performed with materials and instruments supplied by myself. In March, 1852, he made his earliest picture of this class, and in so doing he adopted Archer's process, as then published. His first specimens were exhibited at the stated monthly meeting of the Franklin Institute; and the facts of their production were published in their Journal, Vol. 22d, and 3d Series, meeting of 15th April, 1852.

At the next meeting, he exhibited several other pictures, some of which were obtained by using iodides and bromides combined,

and others by the employment of bromides alone, an account of which may be seen in the same volume of the Institute Journal, meeting of May 20th, 1854.

Subsequently, Dr. Cresson experimented with sundry other agents in combination with collodion, some of which were ammonia, chlorine, starch, essential oils, vegetable coloring matters, and salts of lead, zinc, copper, and gold. The last named was used at the suggestion of John Price Wetherill, Esq.

In one series of pictures, he succeeded in fixing them upon wood, stone, and metal, though he never attempted to print from them.

He remarked that pictures suited for etching can be taken on stone or metal, by using petroleum or lavender, and washing with ether or alcohol, according as negative or positive impressions are desired, and concludes his detail by expressing an inclination to try the effects of fluoric acid upon glass plates, with collodion pictures well burnt in.

Dr. Cresson, in 1852, and Dr. Langdell, in 1853, appear to have been the first in the United States to employ bromide of potassium in combination with the iodide of potassium upon collodion. By the use of the bromide, Dr. Cresson was enabled to get portraits within doors, at a small window, in from ten to twenty seconds; outdoor views in one or two seconds, and even less time; and copies of statuettes, illumined by gaslight, in thirty seconds. This occurred in April, 1852; and a fine portrait of John Price Wetherill was, at the same date, made upon glass by the collodion process. At the same period, he produced several other portraits by the same process, which are still extant, some of them being in my possession.

I have thus submitted to the reader such facts as I have been able to gather, respecting the discovery and earliest applications of gun-cotton and collodion; and I leave him to frame his own conclusions on the various points involved. My statements are facts, authenticated by the best existing authorities, whether published or traditional.—*From advance sheets of M. A. Root's "The Camera and Pencil."* 2d vol.

* Positive portraits. First negatives made by I. Rehn.

HOW TO PAINT PHOTOGRAPHS.

THIRD EDITION.

THE increased demand for colored photographs now existing and constantly growing, makes it positively necessary for photographers who have establishments of any pretension at all to be able to color their work, or to get it done. Of course there are many spare hours that any photographer of good taste may put in, in doing his own colored work.

No labor that he can perform in the sky-light will bring him such remuneration as that devoted to the brush, and it is getting to be found out.

Good taste and judgment is the first requirement to enable one to do the work well, and the next essential is a practical, reliable, and plain book of instructions. This latter, as many are already aware, is furnished by Mr. Geo. B. Ayres, an accomplished artist, whose daily work is painting photographs, in his excellent manual, "How to Paint Photographs." We hardly need say more for it, than to announce that the third edition has been demanded, and is now ready.

But there are several points concerning this edition which need mentioning.

The former editions of the book naturally tended to bring Mr. Ayres more intimately in contact with those he endeavored to teach. He therefore had the opportunity of seeing what stumbling-blocks were in their road to success in painting photographs. These obstructions he has cleared away, by a complete revision of, and additions to, his former editions, and so clear is the way now, that it seems impossible to make a blunder or a botch, when ordinary care is exercised. In addition to this labor, he has added *full instructions on Painting Photographs IN OIL*. That is a capital idea, for, although we do not consider them as beautiful as other classes of work, there is a prevailing prejudice in favor of oil colored photographs being the most permanent.

The photographer must meet the wants of his patrons, and Mr. Ayres must, in turn, meet the wants of his; so he has given all that can be desired in that direction also.

Yet more; he has elaborated and extended his instructions on *Retouching the Negative*,

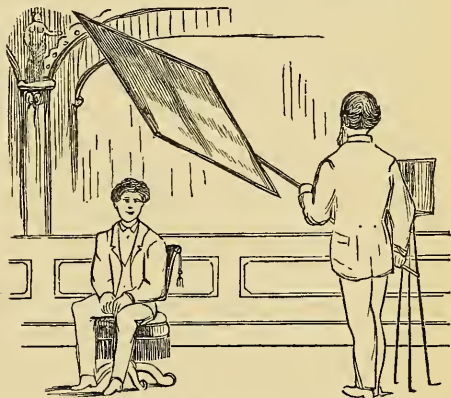
so that by following them carefully, no one can fail to add to his income by the improvement in his work.

We were about to refer to the testimonials given to his book and printed in his advertisement, but there is a better testimonial than any of these, namely, *over five hundred copies of the work were sold before it came from the bindery*. It is now ready for the general good, and no doubt it will receive the unprecedented demand with which the former editions were favored. Price, \$2. Benerman & Wilson, publishers, and also for sale by all dealers.

KENT'S DEVICE FOR MODIFYING THE LIGHT

ON THE HEAD AND FACE OF THE SUBJECT.

THE engraving below is to illustrate the device described by Mr. J. H. Kent, Rochester, N. Y., in his paper* read before the National Photographic Association in Philadelphia, used by him for modifying the



light on the face and head of the subject. The cut is from a photograph kindly supplied by Mr. Kent, showing himself in the act of using his most useful invention. It is free to all, and by reading his paper again, the device will readily be understood.

\$9.00 will purchase *How to Paint Photographs*, Dr. Vogel's *Principles and Practice of Photography*, and *Pictorial Effect in Photography*. These three books will instruct you fully in the art of picture-making.

* See page 214 of our July number.—Ed.

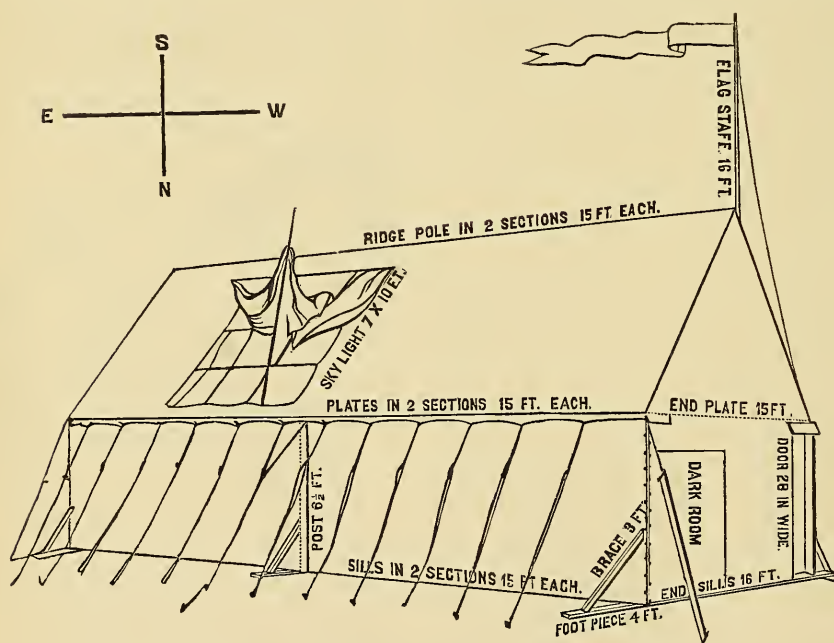
How to Make a Photographic Tent.

WE have had a great many inquiries from our readers as to the best method of constructing a portable photographic tent; such an article being preferable, especially in warm climates, to the ordinary car on wheels. Through the kindness of Messrs. Engle & Furlong, who have worked a number of years in a tent in the Southern States, we are enabled to give a drawing and description of what they have found in their practice to be the best construction.

The drawing below was made from a photograph of Messrs. Engle & Furlong's tent while set up and in use by them. It is an outline only, but the following instructions given will enable others to construct a similar tent for their own use:

ments, size $4\frac{1}{2} \times 8$ feet, by 6 feet high. It consists of a frame with one upright post, and two arms, one $4\frac{1}{2}$ and the other $8\frac{1}{2}$ feet, making the length and width of the room, and fastened to the posts with strap hinges. On the end of each arm is a hook, which fastens to an eye in the plate. The frame is covered with double brown canton flannel.

"The tent frame is covered with twelve-ounce canvas, lined with brown canton flannel to exclude the light. Over and around the skylight are blue curtains, to soften the light. We level the ground with saw-dust, and cover it with cocoa matting. It takes fifty-two yards. The interior is divided into four rooms; three of them are 8×15 feet, and one 8×10 feet. The recep-



"The frame of the tent is made of spruce pine 2×3 inches, except the six posts and foot pieces, which are 3×4 inches. The mortises and tenons are cast-iron. The posts are screwed into the mortises. The tent is pitched with the ends east and west, the skylight to the north. The dark-room is in the west end of the tent, in two apart-

tion room, ladies' dressing room, room under the skylight, and the finishing room, are the four apartments.

"We have used a tent of this description for thirteen years, and find it entirely satisfactory. It cost \$250. The other measurements will be found by referring to the drawing."

AN INTERESTING BOOK.

Mount Washington in Winter, or the Experiences of a Scientific Expedition upon the Highest Mountain in New England. 1870—1871. Boston: Chick & Andrews, publishers, 21 Franklin Street. Price, \$1.50.

This interesting record, which its title explains, is the joint production of Messrs. C. H. Hitchcock, J. H. Huntington, S. A. Nelson, Theodore Smith, A. F. Clough, and H. A. Kimball, members of the expedition, and of Mr. S. L. Holden, of the *Boston Journal*, a visitor.

We notice it particularly, because two good-hearted plucky photographers were members of the expedition, and because it shows to what hardships and privations and labor a photographer who enthusiastically loves his profession, will subject himself to in order to secure "good negatives." That Messrs. Clough and Kimball did well in that direction we have already said.

Although we visited the party, and spent a night and part of two days with them in March, we were not aware of the difficulty they had experienced in getting their project under way. They had to face all sorts of discouragements from sources where they did not expect it, but finally, overcoming all, they succeeded. They have accomplished their hazardous mission, and without very serious accident are returned to the "lower regions" to give the account of themselves so graphically rendered in this work. It will interest all who read it, as well as instruct them. It is gotten up in handsome style, with several fine illustrations. The latter, however, are poor and unsatisfying to one who has "been there." For a few cents cost per copy the publishers could have added photographs from the excellent negatives of our friends, Clough and Kimball, and we wonder that they didn't.

ORNAMENTAL PRINTING.

BY JOHN L. GIBSON.

WHERE an effort is made to improve the character of the photograph produced from an ordinary negative, such process ceases to be purely mechanical in its nature, and the means by which superior effects can be obtained deserve to be studied by us with the

closest attention. There have been very many able men who have worked faithfully and well to improve our methods of printing, but their labors have been mostly confined to the invention or perfection of formulæ, with the view of securing economy of material or ease of manipulation.

There has been comparatively little said of the artificial means which in skilful hands have already produced photographs that rank high in pictorial excellence. It is a mistaken idea to suppose that a print is entirely finished, as far as the action of sunlight is concerned, when you remove it from the frame, and find that everything has worked in admirable chemical order. Before you immerse it in water or commence your toning operations, can you not often see how that picture can possibly be improved, and do you not sometimes have the means readily at your disposal?

Obtrusive parts can be subdued, a flat background can be beautifully graduated, and imperfections reproduced from the negative can often be hidden by the further use of that wondrous agent, "sunshine."

Can we not cover over a portion of our print with shields, protecting such parts from further action of light; and can we not, by the aid of variously shaped boards, make such exquisitely graded shadows that would defy imitation by any other means of production?

Again, are we not able to extend our sphere of action, and ceasing to accept it as a law that one negative will make but one description of picture—can we not use several plates, and combining the utility of each, can we not produce photographs that not only puzzle the uninitiated, but cause the thinking and intelligent workman to study and to admire? The most simple and easily understood form of composition printing is that used in the manufacture of the very popular and pleasing style of cut-out photographs. This is generally confined to the cabinet or imperial and the carte de visite size, although it is equally available for any larger work. As a usual thing, the entire effect can be described as a portrait, limited to the head and shoulders only, with either a very light or very dark background, the combination oval in form, and then sur-

rounded with a flat tint, contrasted from the central oval by its difference of shade. These pictures are so thoroughly different in character from the ordinary vignette, that ourselves and the public have been so long accustomed to, that the latter accepted them as a novelty, and it is now my own experience that they have almost superseded all other styles, where no more of the figure is displayed. In this, as in every other class of handicraft, careful workmanship is necessary for successful results. I have been shown such abominable attempts at the production of this really simple effect, that I have often wondered that men could carry on a business of which they proved themselves so ignorant, and still more that patrons could be found in sufficient number to give them encouragement. One of the most conspicuous faults is that the ovals are so frequently badly cut. They are not only misshapen, but are generally unsightly, by being marked with ragged, uneven edges.

Again, the inside and outside shields rarely seem to fit, and we have either or both a broken line of light or shadow, interfering with whatever harmony of shade that might otherwise have remained. It is true that a skilful workman, blessed with a quickly perceptive or educated eye, can frequently make use of this want of uniformity in the size of his cut-outs, and can surround his picture with a crescent of light, relieved on the opposite side with one of a dark hue, that will often produce a pleasing appearance. The objection to this is, that the light edge is almost invariably too white, and by at once attracting our attention, interferes with the picture proper. In the July number (1871) of the *Philadelphia Photographer*, our firm was represented by an edition of the cut-out style. Since then I have received several communications from different portions of the country, and the Editor has shown me many more addressed to himself, soliciting information in relation to the peculiar effect of the ring surrounding the head, and as to the engraved appearance of the outside tint.

The first is easily produced by having the inside protector made smaller than the oval of the outside shield. The second result is obtained by using a thin negative copied from a lined or ruled surface, instead of cov-

ering your picture with a transparent glass, when doing your second printing. The idea of the striped outside border suggested itself to me from the desire I had to procure such a margin that, from its difference in character, would give more value to the gently blending shadows of the face itself.

The motive influencing me, however, I am afraid has not in all cases been thoroughly understood, for I have been shown a number of imitations, that, although they are highly creditable for having called into operation a deal of ingenuity, still succeed only in proving themselves to be caricatures of the original idea. Those desirous of making negatives capable of printing these borders will find some difficulty in ruling a surface sufficiently well to be successful. My former experience teaches me that it is almost impossible to accomplish it with ruler, pen and ink, or pencil. I had my own made for me, with the aid of a blank-book manufacturer's ruling machine. A very good substitute is a piece of striped muslin or linen, such as is used for shirtings. This is within the reach of all, and presents a good surface from which to copy. I most seriously object to the use of conspicuous or outlandish patterns. They commend themselves to attention at all merely by their novelty, and they are certain to be at once discarded by any one possessing the slightest degree of good taste. I had purposed speaking at some length of composition printing, in relation to the production of large groups, but fear that already my prosiness has induced me to occupy too much of the space that is needed for what may be more valuable matter.

Some years ago I was the proprietor of a gallery admirably located, and unexceptionally complete in everything except one particular.

The operating-room was so placed that its enlargement was out of the question, and its dimensions were such that it was a matter of much difficulty to obtain sufficient distance to photograph an ordinary standing figure. My customers were of a most desirable class, and, of course, not understanding the peculiarities of the room, they often required me to produce pictures that taxed my powers to the utmost. Large groups

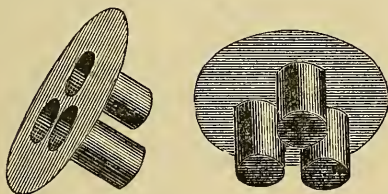
were particularly to be dreaded. In this case, as in others, "necessity became the mother of invention." I was absolutely forced into the composition method of making pictures containing several persons. I finally became convinced of its real advantages, and now deem it the only proper manner by which you can produce an artistically arranged group. My present gallery admits of the simultaneous sitting of a large number of people, and the distance that can be obtained is equal to almost any demand made upon it; but were I called upon to execute a picture of a group, naturally posed, I should most certainly prefer to split the company into very small parties, and by after combinations trust to the formation of a photograph, the limit of which, no lens ever yet invented is capable of covering.

Our Canadian friends have already paid much consideration to groupings of this character, and have been highly successful in their undertakings. I should like to find more of our number working in the same direction, and will be most happy at some future time to communicate whatever items tending to facilitate the labor that my own experience has furnished me with.

PHILADA., August, 1871.

Device for Keeping Collodion Cool.

I SEND you a photograph of a little article which I consider one of the indispensables in my dark-room through the hot weather. It is designed to keep collodion from becoming heated, and consequently giving bad results. It can be made of sheet-iron, zinc, or tin, at a very trifling expense, and is to be inserted in a pail of cold water (ice-



water if necessary); the pots extending their full length into the water. It can also be made to fit any sized collodion vial desired. One look at the engraving will be sufficient explanation of the construction

and use of this cooler, and any artist who has ever been troubled with a hot dark-room will see at once the benefit of this little idea. A round sheet of metal you see is the top; to this any number of little pots may be fastened, and they are set in the water; the top keeping them together, and the pots keeping the bottles dry.

This may be an old notion, but as I have never seen anything of this description used or spoken of in your Journal, I take the liberty to speak to you in regard to it. I have not written this for publication, but if you can give your readers a hint upon this from what I have said, you are at liberty to do so.

L. W. COLBY.

MANCHESTER, N. H.

"READ."

WE were not a little astonished, to say nothing of our gratification, to hear coming from the lips of the distinguished photographers who read papers at the meetings of the National Photographic Association in Philadelphia, the words which head these remarks.

One often meets photographers who claim to "know the whole thing, and no one can't teach them nothing," where he hardly looks for such profound knowledge. But here are men whom we might reasonably expect to be able to do without any further instruction in their art, saying, *read*—"read your journals and your books." Mr. Henry J. Newton, in his excellent paper, after pointing out several avenues to success, said:

"There is another broad and popular avenue to knowledge such as you desire, or should desire, in the many ably conducted periodicals published here and abroad.

"Read all that is written on the subject, whether in book or pamphlet form; do not fear that you will *know too much* on the subject; digest well what you glean from the sayings or writings of others, and you will often find practical application of much thus acquired."

Mr. F. Thorp, one of the growing photographers of the West, in his pertinent suggestions on success, said: "And in regard to the manner of investing our money,

I think, if we would pay out ten dollars for photographic literature, where we pay out one for patent rights, we would succeed much better." (Applause.)

Mr. W. J. Baker, in the discussion on retouching negatives, on being asked to give some instructions in that direction, said: "Gentlemen, *you must read your journals more attentively*, and you will be better informed."

Again, in his admirable paper on "Pictorial Effect," he said: "As a means of elevating your taste, *read*,—study to find out what you ought to admire. The greatest critic of modern times, Sainte Beuve, says to this effect, that, 'in looking at any work of art, we ought to ask ourselves, not does this please us, but ought we to be pleased with this?' To this end read; read the literature of your profession."

Surely such testimony as this encourages us to go on and work harder than ever before to make the contents of our publications of such choice nature that it will instruct and help all who read the same. We feel the responsibility of our situation. We hope to meet the emergency. Our labor will be sweeter, if we know that what we publish is read, and that it is doing good for the cause we are devoted to.

Let us hope, then, that what we send out, you will "*read*."

WRINKLES AND DODGES.

One Cause for Pinholes in Negatives.—A fixing bath of cyanide or hypo, that has been overworked and full of silver, will cause negatives to be full of pinholes, for which the bath will be blamed and doctored. —G. W. CHASE.

Yellow Glass.—Having lately heard several complaints about the yellow glass in the dark not being of any use, I wish to state, use no yellow glass which has been colored with carbon; the only kind which will not admit actinic light is that which is stained with oxide of silver.

Better than all glass, stretch over the opening used as a window thin *sheet* rubber. This keeps out *all* actinic light, and you can work with your room as light as you please without causing fog. —J. H. HALLENBECK.

Washing Prints.—Having read some fifty plans of washing prints, none of which appear to me so effectual as the one I have practiced during the last ten years, I am desirous to make it known through your journal. It is, perhaps, already adopted by some, but not having seen it published, there may be others to whom it will be useful.

When the prints are ready for washing, rinse them in three or four changes of water; then place them upon a clean piece of sheet zinc—without regard to regularity, except that they must be free from folds; upon them lay a piece of *smooth* patent cloth, patent side down, and pass them through a common wringing machine with India-rubber rollers; raise the patent cloth gently to avoid tearing, remove them from the zinc to the washing tray, and pour water upon them from a height of two or three feet, which will have the effect of separating most of them; the fingers will do the rest. Repeat the operation of washing and wringing five or six times, and blot off. By this means five dozen carte pictures can be thoroughly washed in an hour or less. —G. W. FARDON, Victoria, V. I.

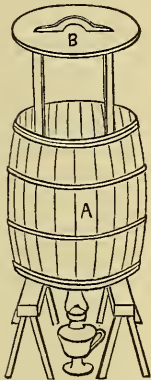
Thinking you might like a joke for a corner of your valuable journal, the *Photographer*, I send you this afternoon's experience: A fellow came in for an ambrotype and said to me, "I have come back to you, but you made my last picture very bad; you didn't give me a pair of feet at all." It was a $\frac{2}{3}$ picture.

Making Varnish.—Knowing that a large number of the photographers make their own varnish and have some trouble in the dissolving of the gum, I send the following as used by Mr. F. Barkley. The gum by his process will dissolve and settle in a remarkably short time.

Pulverize the gum; pulverize some glass; mix them intimately, then add your alcohol. The glass keeps the small particles of gum *separated* and gives the alcohol a chance to act on *every side*, thus causing it to dissolve rapidly. When the glass is not added the gum falls in a lump, and only the outside is acted upon, thus taking a long time, sometimes even days, when by the alcohol process only a few hours is required. Yours, in the best of bonds, PERAMBULATOR.

Turnbull's "Home-Made" Drying Apparatus.

I INCLOSE you a rough sketch and short description of a paper-drying apparatus that I used several years ago. Seeing the newly patented fuming and drying apparatus at the Exhibition, has induced me to send this. My apparatus was a common



flour barrel with a sheet-iron head in the bottom and the top open, and which was covered with a lid about one inch thick and two or three inches larger than the top of the barrel. To the under lid was a frame almost as long as the barrel; the paper was fastened to this frame, and then let down into the barrel. The under side of the cover had some thick cloth tacked around it, so that it served to keep

the heat in the barrel by packing the joint. A common coal oil lamp was used under it for heat.

A. E. TURNBULL.

LITTLE DROPS OF GOLD.

BY YOUNG CHLORIDE.

SUMMER VACATIONS.—I hope my "disappearance" has not filled my good friend, "Old Argentum," with solicitation, or appeared "mysterious." As the readers of the *World* know, I have had a very narrow escape from annihilation since I last wrote you. Moreover, I have been taking my summer vacation, and again, I knew the National Photographic Association matter was crowding you, so I stood back. Everybody ought to take a summer vacation. It delays that *long* rest which we must all take, sooner or later, and very often *sooner*, with the poor fellows who have to fish away in a nitrate bath from one end of the year to the other, or study human nature, under a badly ventilated skylight.

"LECTURETTES ON CHEMISTRY."—I am delighted to see in the August *World* the commencement of a series of "Lecturettes"

on Photographic Chemistry. I promise you it will get you a great many subscribers, for it is, above all things else, what we want.

Not one photographer in ten knows *why* his results are good or bad; he cannot, therefore, feel *sure* of success always, for he don't know the conditions of it. And when he gets into trouble and fails, then is he, "of all men, the most miserable." He flounders about like a drowning man, catching at every straw of a guess, until he sinks deeper and deeper in the muddle.

If he have a knowledge of some of the simplest rudiments of chemistry in his "skull," he can work out of trouble or into success at will. This, I believe, he will be taught in the series of lecturettes you are now giving in the *World*. Thank the author for us, and let me urge every one who *needs* instruction in this direction—and few don't—to take the *World*—and who don't? again—and secure the whole series. The first four lecturettes in the August number alone are worth a year's subscription.

"EDUCATED PHOTOGRAPHERS."—This brings to my mind your excellent "Table Talk" in the last *World* on the subject of educated photographers. I am only a young photographer, of less than four years' standing. I do not boast of anything more than a good country school education, but I went into photography with my whole heart and strength, to make myself master of it. I am succeeding reasonably by hard study, but I tell you, contact with my co-workers at the National Exhibitions has revealed unto me things that I never dreamed of. One of them is the singularly small knowledge many photographers have of their business. Men who have actually been in the business for a great many years—"made daguerreotypes," perhaps—and who seem yet to be ignorant of the first principles of it. It scared me, I tell you. But I am not without hope. Those who come to the annual gatherings, come thirsting for knowledge. They are becoming the educated ones, and *they* are going to be the successful ones. Believe it? Why, look for yourself, if you will, and you will see it.

If a knowledge of geology makes a better printer, then a knowledge of chemistry and lighting, and of your too little appreciated

letters on "Position and Composition," will make better photographers, and knowledge is what they want.

You may pass over such invaluable, priceless articles as Mr. W. J. Baker's, in the last *Photographer*, as dry, but I tell you, fellow photographers, unless you *thirst* for such dryness, your art is going to get ahead of you, and it ought to.

With such works as our publishers turn out from their press, there ought to be no ignoramuses among us, and there should be no toleration for them, if there are any.

THE FOREIGN PICTURES AT THE EXHIBITION.

WHILE the number of pictures from foreign countries at our late Exhibition was not large, yet there were enough to give an idea of the various classes of work made in England and Germany, and to make opportunity for comparison with the work done at home.

Our English and Scotch brethren are undoubtedly ahead of us in the matter of landscape and *genre* photography. Both of these classes were splendidly represented by Messrs. Robinson & Cherrill, whose work is without a superior. In both classes, too, "*combination printing*,"—which art Mr. Robinson so plainly teaches in his excellent book, "*Pictorial Effect in Photography*,"—is practiced with admirable effect. This printing of one picture from several negatives is in this country very rarely practiced.

Mr. Hubbard's "Stolen Moments" is another example of this class, and was superior in composition and finish to anything of that order exhibited. It was a true gem, which any figure-painter might feel honestly proud of. It attracted universal admiration, and is a proof of the truth that "it is better to produce one *good* picture than many bad ones." Mr. Hubbard evidently understands that maxim.

Added to the list of *genre* work the five little pictures, "The Smithy," "Peep Show," "The Broken Toe," the "Young Artist," and "Waiting for Change," by Mr. Diss-ton, come to our notice, and very fine specimens they are too,—each one full of life,

and naturally and admirably arranged and photographed. Each one tells a plain, unvarnished story, with a vein of rare good nature in all. Those aspiring in that direction would do well to secure them as studies.

The 8 x 10 Salomonesque pictures, by Mr. N. Briggs, were also very fine.

Mr. Notman's large composition picture, "The Skating Carnival," our readers are familiar with from the copy of it given in our last December number. Mr. Notman has no equal in this line, and in all sorts of work no superior. In the matter of landscape work, Mr. Alexander Henderson had some fine things; while the very best landscape work in the exhibition was from Mr. Geo. Washington Wilson, Aberdeen, Scotland. There are qualities about his work which are hard to understand without seeing them, and which we have heretofore vainly tried to describe. We hope many in this country will aspire to such excellence.

The *German* work also taught us some useful lessons. The German landscape photographs were some of them very good, those by Messrs. Gustav Schauer and K. Schwier being among the best. In portraiture they are fully up to us, or rather we have caught up to them; and we are both far ahead of English portraiture, so far as we have seen. A few years ago the Germans were undoubtedly the best portrait photographers in the world. The exhibition of their work in this country awakened some of our live artists; and now we think American work in that line will equal any that is done. Messrs. Loescher & Petsch, whose fame is well established in this country, are ahead of the world in grouping figures for the stereoscope. There is only one Max Petsch, and we feared the war was going to rob us of him; but he is safe home again, and soon we expect to hear of something grand being done by him. No new work was exhibited by Loescher & Petsch, but their old work was, and it had but few superiors. There were four pictures by Ernst Milster, 11 x 14 size, from negatives retouched in a style peculiar to Milster, and which is a very elegant style. They attracted much attention by their delicacy, and beauty, and roundness, and were certainly splendid. They were purchased by Mr. H. B. Hillyer, Austin, Texas, in whose

gallery they now hang as *studies* for himself.

Mr. Johannes Grasshoff also exhibited some grand things of cabinet, Victoria, and card size. Mr. Grasshoff is an excellent artist. He has only followed photography a couple of years or so, but comprehends it fully, works hard, and now equals those who were but a short time ago far ahead of him. Among others he exhibited a card of portraits of the members of the Berlin Society, and, on account of the names of many there represented being familiar to our readers, we are reproducing the group for one of our Magazines.

In copying oil paintings the Germans do a large business, and greatly excel our home photographers. Messrs. Milster and Schauer excel in this class of work. The portraiture of Mr. Carl Suck was very creditable, though tending a little to hardness.

In the line of photo-lithography, or light-druck, we do but little in this country, while in Berlin very much is done. The examples exhibited by Messrs. Obernetter, and Ohm & Grossman, were excellent indeed, and rivalled silver prints in all good qualities. We hope to see the day soon when we shall excel in *all* branches of photography on our own soil.

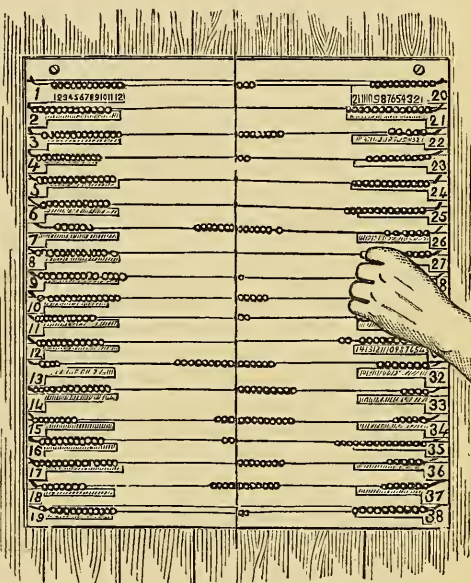
KENT'S TALLY-BOARD.

No matter how humble the gallery, we contend that one may learn something from every one he visits. Nearly every photographer has some little contrivance or other which he has adopted for his own convenience, which would be useful to many others if it were known to them. In the studio of our good friend, Mr. J. H. Kent, at Rochester, N. Y., and which, by the way, is not a very humble one, we saw during a recent visit several things that were new to us, and, with his generous permission, we tell of some of them. In the printing-room we found a device for keeping tally of the number of prints made from each negative, which struck us as very useful.

When we first went to school, the good old maiden who taught our youngest ideas how to shoot, and who is still living, over 90 years old, had an upright frame erected

on a stand with parallel wires therein fastened, running from right to left. On these wires ebony balls were strung, varying in their number. The "young ideas" were then brought up in line in front of this article of torture, and, with hands behind, made to tell how many balls "Old Jinny" would have to move with her slender rod (also used for another purpose) to make "two," "four," &c., &c. Mr. Kent, no doubt, learned to count in the same way, and, not forgetting his Alma Mater, applies his early teachings to his business in the following way:

A framework is made, as shown in the



drawing, with a double tier of parallel wires, on which are strung ordinary beads of the size of a large pea. At the sides of the frame strips of paper are pasted, in order to give a number to each row of balls. Under the balls numbers are also pasted.

To use this contrivance, each printing-frame is to be numbered. Let us suppose we are using printing-frame No. 1, or, no matter, we will take No. 38. The order is for twelve prints from a certain negative. We place it in printing-frame No. 38, and as we print we move a ball on wire No. 38, and so on, until twelve prints are made. It will be seen that, no matter what printing-frame you pick up, there is a row of balls or

beads to correspond, and you cannot go wrong. The tally-board should be hung near where the paper is placed in the printing-frame, and where the prints are taken out when done.

Thus a correct tally is kept of all the prints made. It saves pasting strips of paper on the negative or on the frame; saves keeping tally with a lead pencil or pen, and is good for one or for a hundred years. The greater the number of printing-frames you have the larger must be your tally-board; or, in large establishments, a tally-board and a set of frames may be supplied each printer.

We have seen it used; it works charmingly.

NEGATIVE VARNISHES AND THEIR MANAGEMENT.

BY M. CAREY LEA.

MUCH more attention than usual has been directed in these last months to the destruction of negatives, resulting from insufficient protection by the varnishing. I propose in this paper, besides some remarks on the general subject of varnishing negatives, to call attention to one source of trouble about which very little has been said: I mean, to the use of *too thin* a varnish.

Varnishes are usually sold of a proper thickness. The published formulæ also give a proper strength of varnish, unless indeed the alcohol used has been too watery; and has left undissolved portions of material which it ought to have taken up.

But after varnish has been once used, and has been poured off the plates, it is considerably changed. It has darkened somewhat in color, and has become considerably thickened. Before being used again, it needs to be diluted with alcohol, and it is very easy to carry this dilution too far. If alcohol enough is added to bring the color down to match that of the fresh material, the dilution will have been far too great.

When negatives have been coated with too thin a varnish, they do not at first show any difference of appearance, unless indeed the want of body has been very great. There may not be the least deadness of surface, which may be bright and glassy, and yet the protection may be quite insufficient.

This fault in varnishing will show itself, not so much by cracks or ridges resulting, as by scaling off. Sometimes a negative will bear printing from for some time, and then suddenly a flake will detach itself and the negative is probably ruined, and this may happen whilst the negative is standing in its box. Or, if in printing there be the slightest trace of moisture on the paper, or even sometimes, perhaps, without it, parts of the film will adhere to the paper and come away with it.

The only real trouble I have had with varnishes for many years, I traced to the cause just described, not, however, before losing some valuable negatives first. I have never used a bad varnish, and the protection that is afforded by a really good one is something remarkable. I have described in the second edition of my "Manual" the wonderful resistance afforded by the varnishes, of which the formulæ are there given, to wet, and as the experiment there described was still unfinished at the time when the book went to press, I take this opportunity to describe its continuation.

The pieces cut out of the negatives varnished with the different varnishes, as there described (pp. 375, 431), had been left in water up to the time when the book went to press, *three months*; one had resisted perfectly, and two others sufficiently, having only shown a slight puckering at one corner. Since then, the trial has been extended to *four and a half months*, at the expiration of which the condition of matters continued unchanged, the last month and a half having produced no difference whatever. The one film remained entirely perfect, and the other showed no further injuring than the slight fold at one corner already described, which had not increased in size.

The investigation of which this experiment formed a part, was entered into with a view of aiding to ascertain exactly what were the conditions of perfect protection to negatives. The amount of time which is expended in their production by the very many thousands of photographers constantly at work, is so large, that one cannot but regret to see the results destroyed so frequently as they are, by want of efficient protection.

And it is in reality, just as easy to give a negative a perfect as an imperfect protection. The conditions of complete protection are as follows :

1. To have a good varnish to start with.
2. To keep it in good order, avoiding to dilute it too much, as above explained.
3. To have the negative thoroughly dry and warm before applying the varnish.
4. To keep the varnish on the plate for a sufficient time. Neglect of this is the commonest of all faults, and, as I have elsewhere pointed out, this is the origin of "honeycomb cracks." After the plate has been fully covered, keep the pool on it for ten or twelve seconds before *beginning* to pour off.
5. To heat the plate thoroughly after varnishing. This heating has been usually done in order to prevent drying dead, but I have shown by the experiment detailed in the new edition of my "Manual," that it has another use not hitherto understood, and that is, to drive off the last portions of the essential oil used in all varnishes. The introduction of these volatile oils seems to be necessary in order that the film of varnish may be let in a proper condition, but they must be expelled again, or will do injury. If they are omitted from the varnish, the danger of cracking is greatly increased, as was shown by the experience of Mr. Wenderoth; if they are left in, the tendency of the negative to stick to the silvered paper in very hot weather is greatly increased. This last fact was brought out in the plainest manner in my experiments, and explains what has hitherto seemed difficult to understand, viz.: that some negatives show much more tendency than others to become sticky with heat, though varnished with the same varnish, and exposed in printing to the same degree of heat. The explanation is, that some have been dried at a higher temperature after varnishing than others. This difference may have arisen by simply holding them nearer to the source of heat, or for a longer time. It is necessary to recollect, however, that too high a heat, or a proper heat too long continued, is also injurious. \

GERMAN PHOTOGRAPHERS' SOCIETY, NEW YORK.

THE general monthly meeting of this Society was held August 4th, at their rooms, 28 Stanton Street. President, W. Kurtz, in the chair.

Minutes of the last meeting were read and approved.

Messrs. B. Kihlholz and Barth. Meyer, Chicago, Ill., were elected members.

The committee, appointed last meeting, to submit prints from weak negatives, printed by different methods, had not quite finished their experiments, and had their time of reporting extended till next general meeting.

The following report was received from another committee:

MR. PRESIDENT AND GENTLEMEN OF THE GERMAN PHOTOGRAPHERS' SOCIETY:

Your committee, appointed to compare J. W. Morgeneier's book of instructions in retouching negatives and photographs, with Mr. H. Hartman's article about "the purpose and limit of retouching," published in the *Photographische Mittheilungen*, 1870, pages 87 and 116, beg leave to submit the following report:

After a careful and thorough perusal of both gentlemen's writings, we must pronounce Mr. Morgeneier's book an almost literal translation from Mr. Hartman's articles, merely using the precaution of changing the order in which the periods follow and abbreviating the different parts. To prove our assertion, we have selected at random some periods from Mr. H., and submit them to you for comparison with the corresponding remarks of Mr. M.:

Mr. H.—*Schiefe Nasen in der Front oder auch profile Ansicht können oft gebessert werden. . . . Die Schatten in den Nasenlöchern dürfen nicht absolut schwarz bleiben. . . . Durch Aufhellen der Nasenspitze wird dieselbe sofort losgelöst und wird plastischer.*

Mr. M.—*In a front face or a profile position, crooked noses may be very much improved. . . . The shades of the nostrils should not be absolutely dark. . . . Intensifying the point of the nose with the pencil gives it a classical appearance.*

Mr. H.—*Der Mund in seiner leichten Beweglichkeit, in dem herabsinken oder*

heben seiner Winkel ist ein Hauptmerkmal innerer Vorgänge.

Mr. M.—The mouth, through the easy motion of the raising up or down of the corners, is the principal sign of intense emotion.

Mr. H.—Das Grübchen in der Mitte des Kinns muss gemildert werden, da es oft in Gestalt eines *Schnittes* oder *dunklen Loches* auftritt.

Mr. M.—The dimple in the chin should be softened, as it often appears as a *cut* or a *dark spot*.

These samples alone prove sufficiently the plagiarism of Mr. M., and in the face of them the gentleman don't hesitate to say in his preface that this book has cost him many years of labor and experiment.

For the benefit of our American co-laborers who don't understand German, we would mention that Mr. H.'s article is translated in the *Photographic World* of May and June, crediting of course Mr. Hartman with the authorship. Compare Mr. M.'s book with it, and then draw your own conclusions.

We would mention further that the whole book consists of twelve pages, three of which are taken up with preface, index, and advertisement of some varnish, leaving nine pages of reading matter and a title-page, with two portraits of some lady,—one plain, the other from retouched negatives. The price for all this is the *moderate* sum of \$1.50.

Respectfully, the Committee,

H. SCHOEN,

EDWARD BOETSCHER.

It was moved and carried to accept the report, and to publish it in the principal photographic journals.

The undersigned notified the meeting that Mr. Newton had invented a new process, by which he claims to take all the hypo entirely out of the prints in about ten minutes. His process is as follows: After taking your prints out of the hypo rinse them off once or twice, then put them in a solution of acetate of lead, 1 grain to the ounce of water; leave them in it for about three minutes, and wash five to ten minutes. This method has certainly a great many advantages over the old way of long washing; the theory is, that the hyposulphite of soda is changed to acetate of soda, very easy to wash out, and the

lead is precipitated as sulphate, and very likely sulphuret of lead, both salts almost insoluble in water, and for that reason perfectly harmless in regard to the prints. The only question is, if by the decomposing of the hypo, there be not some free sulphur left in the prints, changing them in time to gray and yellow.

As the meeting deemed the subject of great importance, and interesting enough for experiments and further discussion, Messrs. Kutscher, Boetscher, and J. Wolff were nominated a committee, with instructions to report at the next general meeting.

Adjourned.

EDWARD BOETSCHER,
Secretary.

THE INDIANAPOLIS PHOTOGRAPHIC ASSOCIATION.

THE regular monthly meeting of the Indianapolis Photographic Association was held at C. B. Ingraham's Gallery, Wednesday evening, August 2d.

Meeting opened with President Adams in the chair, and thirteen members present. Minutes of July meeting were read and approved.

On motion, the rules were suspended, in order that the Society might hear a lecture from Prof. R. T. Brown, who is an honorary member of the Association, and was one of the pioneer daguerreotypists; and who was, by invitation, present for that purpose. The evening was oppressively hot, but the Professor spoke in a very interesting and entertaining manner for about half an hour, and certainly not the least interesting part of his address was that which related to his own efforts at daguerreotyping in the year 1842, when only iodine was used as a sensitizer, and a thirty-minute sitting required to catch a shadow.

At the conclusion of his remarks a vote of thanks was tendered him by the Association, and then the order of business was again resumed, and reports from several committees presented.

The committee on arranging a circular to send to the photographers throughout the State, to try to induce them to join our Society, presented the matter for the same,

which was in some respects only partially completed; and, on motion, it was referred back to them, with instructions to complete the same to their own satisfaction, and have it printed.

The committee appointed to devise means by which to make our meetings interesting to photographers outside the city, reported to the effect that the Secretary be requested to furnish a copy of the proceedings of each meeting to the *Philadelphia Photographer*, or any other photographic periodical that will gratuitously publish the same. Also recommending the members to patronize such journals as would thus publish our proceedings. Report accepted and committee discharged.

The Secretary reported that he had received written applications for membership from four persons—three of whom live in other towns—all accompanied by the necessary greenbacks, and moved that the Association proceed to ballot, which was agreed to, and all the four were unanimously elected. It was reported that an agent in the interest of the Woodward solar camera patent was in the city and had intimated to some of the members that he would be glad to have them "call at the captain's office and settle." And, on motion of the Secretary, a committee of three was appointed to confer with the said agent, and ask for his credentials, terms, &c., and ask a little time to "post up" with reference to the matter.

On motion, adjourned to meet at D. R. Clark's Gallery, the first Wednesday evening in September.

J. PERRY ELLIOTT,
Secretary.

CORRESPONDENCE.

PERHAPS I have been a too careless reader of the *Photographer*; but I have no recollection of seeing anything in it about washed paper, except what Dr. Vogel writes in one of his late letters. I am not aware that it is practiced in this country by photographers; if so, I would like to hear from them on the subject.

My experience on a small scale is, that it is a great improvement. This hot, dog-day weather, when the paper was simply silvered

and fumed in the ordinary way, it turned very quickly; while that which I floated a few seconds on a dish of pure water, immediately after silvering and hung up, dried and fumed as usual, kept white and nice. It seems to me that this is a subject worthy of attention, for who likes to see the picture after it is mounted (or rather the paper on which the picture is made) look several shades darker than the board on which it is mounted. I attended nearly all the meetings during the Convention, but don't think the subject was discussed. If we can prepare the paper so as to keep for several days, if need be, it appears to me to be a big thing. Will not those (if any) who have had experience, give us their *modus operandi*?

ROBERT H. BLAIR.

SMYRNA, DEL.

PHOTOGRAPHIC DIALOGUES.

BY ELBERT ANDERSON,
Operator Kurtz's Gallery, 872 Broadway, N. Y.

Anderson—Well, Marshall, how goes it to-day?

Marshall—About as usual, pretty thirsty. Sewing your camera cloth, I see. And how are you; well?

A. No, I am sorry to say, I am only (excuse the joke) so-so. I wish I was like Mr. Pickwick's Sam—Weller.

M. Your camera cloth is more holy than righteous, as the saying is; which calls to my mind the man in the parable.

A. Yes! well, what did he do?

M. Sowed his tares, you know.

A. Well I hope he did it a darned sight better than this; I shall have to do this over again some day.

M. As you sew, so shall you rip, I'm a thinking; which brings us to the question of *collodio-chloride*.

A. Here are two pictures on porcelain, one on the smooth side of a plate intended for a plain picture, and the other on the ground surface of a plate, intended for coloring.

M. There's a vast difference betwixt 'em.

A. Naturally, since they are made by different processes. The smooth plates are washed in the same manner as I have previously directed for glass for negatives. The

plate must be perfectly flat, especially for plain pictures. When the plate is dry, and well *polished*, it is to be flowed with the following preparation: Take equal parts of albumen and water, thoroughly mixed, either by beating or shaking, and filter it through a clean sponge; if it does not come through perfectly clear, add aqua ammonia drop by drop, shake, until it is so, and again filter. Take of the above

Albumen,	1 ounce.
Chloride of Strontia or Calcium,	2 grains.
Citric Acid,	3 "
Nitrate of Silver,	5 "

Dissolve the salts thoroughly (by grinding in a glass mortar, with the albumen) in the following order. First, the citric acid, second, the chloride, and lastly—in the dark—the silver. This should form a milky liquid, and cause some precipitate of chloride of silver. Before coating the plate shake thoroughly. Coat the plate *twice*—in the dark of course—with the above, allowing it to dry between each coat; after which, when quite dry, it is exposed under a negative with any of the various kinds of porcelain printing-frames. In default of which, an ordinary printing-frame (for paper) will answer. Be careful to secure the glass of the frame to prevent its moving, and gum the negative fast to this glass. The porcelain plate may be hinged to the negative at one end by a piece of gum paper, which will allow of its being examined during the progress of printing. When slightly over-printed, dip the plate into a basin of clean water slightly acidulated with acetic acid, where it may remain about ten minutes, and then washed thoroughly under the tap. Tone with a weak solution of chloride of gold in water neutralized with bicarbonate of soda, wash and fix in hypo (one hypo to six water) for five minutes; wash one hour.

M. This picture looks very fine and delicate.

A. You must have a very fine and delicate negative, in the first place, taken on very flat glass, to insure close contact. Without considerable experience—which of course I cannot give in *conversation*—you may be apt to fail; if so, *fail*, and try again.

M. I certainly will (try again, I mean). How was *this* one made?

A. The first one was made by what you may call the albumen process; *this* one is the regular *collodio-chloride*, which, as its name implies, was made with a *collodion* containing a *chloride*. You may make your plain picture by this method, also, if you desire, and perhaps as a novice you will succeed better.

The original *collodio-chloride* process was first introduced, I believe, by Mr. G. Wharton Simpson, of London, though several have since tried to deprive him of his title; the formulæ is one which I have used for years invariably with success, Mr. Kurtz's porcelain pictures being proverbially *sans peur et sans reproche*.

As in the above process, the plate—as well as the negative—must be as flat as possible, and washed as ordinary glass, after which it is “gone over” with a muller and finely pulverized flint; in default of which, use pumice.

M. By the by, what is pumice?

A. Pumicestone.

M. I mean, what is its nature? a kind of chalk or brick?

A. Oh, no. I believe it is a kind of lava, ejected from volcanoes. Whilst the plate is still wet and clean, flow it twice with albumen made as above described, before the addition of the salts.

M. You mean plain albumen made half and half, with water, and cleared with ammonia?

A. Exactly. Set the plate up to dry. Now take—

Plain Collodion,	1 ounce.
Nitrate of Silver,	5 or 6 grains.
Chloride of Strontium or Calcium,	2 "
Citric Acid,	3 "

Mix according to the directions already given. The grinding of the silver is a long and tedious operation, occupying nearly half an hour; [*hurry*, and do this, and your *collodio-chloride* will be worthless.] “If it were *done*, when it *is* done, then, it were *well* [it were *not* done quickly.]” This *emulsion* must not be milky white, but of a bluish opaline transparency. Coat the plate once, and print as before directed. Tone with a weak gold bath, fix ten minutes, and wash one hour under the tap. When it comes to the coloring, you, Mr. Artist, can no doubt instruct me.

M. Well, I'm sure, I'm greatly obliged to you, and I'm right sorry to say good-bye.

A. It is good-bye indeed this time.

M. How so?

A. I am going to join the fashionables.

M. Great heavens! you are not going to commit suicide, are you? pray don't, for my sake.

A. Calm your agitation, my dear sir; you misunderstand me. I mean, I am going to spend a month at Newport, Rhode Island, the fashionable watering place; thus I shall be deprived the great pleasure of seeing you very soon again. I am going to bathe in the briny deep among the —

M. Skinny tribe! yes, I see; well, *Oh river!*

OUR PICTURE.

THROUGH the kindness of Mr. Alexander Wilson, Leamington, England, who kindly presented us with the negatives, we are enabled to give our readers this month a view of more than usual interest, and of an ancient structure almost hallowed in its associations, and at least immortalized by the immortal Sir Walter Scott.

The negatives are gems of perfect manipulation, fully sustaining the enviable reputation which Mr. Wilson enjoys all over the world. He could not have sent them of a more interesting subject; and a few remarks concerning old Kenilworth may not be out of place here, but welcome to our readers. In a work issued August 15, on the one-hundredth birthday of Sir Walter Scott, entitled "*Sir Walter Scott: the Story of his Life*," written by our good friend, Dr. R. Shelton Mackenzie, of Philadelphia (whom, our early subscribers will remember, also wrote the first article in the first number of the *Philadelphia Photographer*, and who is also the Literary Editor of *The Press*, Philadelphia), we find much about this old castle, and also an account of the romance entitled "Kenilworth," written by Sir Walter.

In Mr. James F. Hunnewell's *Lands of Scott*, published last April by Messrs. J. R. Osgood & Co., Boston, we find a great deal about the subject of our picture. Mr. Hunnewell says: "About midway between Coventry and Warwick or Leamington

is Kenilworth, with the shattered but extensive remains of its famous castle, universally known by its history, its romance, and, in no small degree, by its associations with the work sketched in this chapter; in which Scott has so graphically, vividly, and affectingly pictured the brilliancy and pathos of its most splendid fortunes, and by which he has rendered the whole of its area his own enchanted ground, and its walls and towers one of his strongholds, all enlivened by impressive characters whom he has revived or created. An important portion of the action of this work is represented to have been here, although many of the scenes are laid elsewhere. Aspects of the localities of the latter have, however, changed so much since the time described in the story that they suggest little of it; while Kenilworth remains both one of the most imposing relics chiefly of that period, and the most prominent and attractive object associated with Scott's work. It is also very accessible. Travellers, whether or not they follow the route described on these pages, will almost of course visit its vicinity; for if they explore only one rural district of England, this should be the one, not alone from its interest, but from its position upon the direct way between Liverpool, or Chester, or North Wales, or Derbyshire, and London. After brief attention to the literary history of the novel, and to a few places remote from Kenilworth, we can, in nearer and more careful view, realize the fascinations of the grand old Castle." . . .

"Its general position and history may be described in the language of Robert Laneham, 'clerk of the Council Chamber door,' whose 'letter' is one of the curiosities of literature:

"'The Castl (he wrote) hath name of Kilingwoorth, but of truth grounded uppon feythfull storie Kenelwoorth. (One will observe that he is uncommonly careful about spelling.) It stonds in Warwykshyre, a lxxiiii myle northwest from London, and az it wear in the Nauell of Englande. foure myle sumwhat South from Couentree a proper Cittee, and a lyke distauns from Warwyk, a fayre Sheere Toun on the North: In ayr sweet and hollsum, raised on an eazy mounted hill, iz sett eenuenlie coasted with the froont

straight intoo the East, hath the tenaunts and Tooun about it, that pleasantly shifts, from dale to Hyll sundry whear wyth sweet Springs bursting foorth: and iz so plentifullie well sorted on euery side intoo arabl, meado, pasture, wood, water, & good ayrz az it appeerz to have need of nothing that may perteyn too liuing or pleazure. Too auantage hath it, hard on the West, still nourisht with many liuely Springs, a goodly Pool of rare beauty, bredth, length, deapth, and store of all kinde fresh water fish, delicat, great and fat, and also of wild fooul byside. . . . The Castl, . . . (az by the name & by storiez, well may be gathered) waz first reared by *Kenulph* and his young sun and successor *Kenelm*: born both indeed within the Ream heer, but yet of the race of Saxons: and reigned kings of Marchlond [Mercia] fro the yeer of oour Lord. 798. too 23. yeerz toogether, aboue 770. yeer ago. Although the Castl hath one auncient strong and large Keep that iz called Cezarz Tour, rather (as I have good cauz to think) for that it iz square and hye foormed after the maner of Cezarz Fortz than that euer he bylt it.' And as Laneham continued addressing 'hiz freend a Citizen and Merchaut of London,' to whom he sent this letter, the writer may add, 'noow I am a littl in, Master Martin ile tell you all.'

"The approach to the castle, from almost any direction, is through picturesque and characteristic English rural scenery, abounding with green fields, stately shade-trees, trim hedge-rows, fine residences, curious old cottages, and romantic, wooded nooks. The 'Tooun,' adjoining the castle, is a busy little country town. With all its industrial resources, however, the people living in it, as Elihu Burritt writes, 'would probably confess that the principal source of their income is derived from their vested interest in Sir Walter Scott's "*Kenilworth*," not in the real castle walls. Take away that famous novel, and, with all the authenticated history that remains attached to them, not one in five of the visitors they now attract would walk around them with admiration. In fact, they are more a monument to the genius of the great novelist than to the memory of Elizabeth and the Earl of Leicester.'"

Many more interesting details are given,

which we regret our space will not allow us to reprint.

Dr. Mackenzie visited Kenilworth about twenty-five years ago, and says that "then it did not seem as much of a ruins as the view by Mr. Wilson shows."

Quoting from Mr. Hunnewell's book again, he says:

"The writer found this quadrangle of once stately structures perhaps the saddest and most suggestive example in England of departed domestic greatness, and of the devastation of fanaticism and avarice. The buildings northward (erected by Old John of Gaunt, 'time-honored Lancaster,' as has been noted) were much broken; and so also was Amy Robsart's tower—for that it should be called. Visitors can even yet ascend its dilapidated turnpike stair, and gain a wide view over the ruins and the country around. The Hall was a mere shell, and open to the sky almost from its foundations. Amy Robsart there seemed indeed avenged. The state apartments were almost chaotic; merely enough remaining of them to give an idea of what they once were. Leicester's buildings were yet almost sixty feet high, with some of the walls square and plumb as when erected, although a western wall leaned inward. They contained a great staircase, and three large rooms on each of several floors, all of which latter were of wood and have disappeared, leaving the interior open from base to top. Some of the plastering adhered as laid upon the wall itself. The 'caps' over the internal openings are oak beams, placed as wood is often placed in modern buildings. The lofty oriel windows, once stone-mullioned and transomed, were shattered. The lower parts of the exterior had assumed a faded ash-red color; the upper parts were grayish, and tinted with dull russet lichens,—the left turret was, however, to its very base mottled with mouldy colored lichens. The stone is of a more friable quality than that in some of the older erections. A vast deal of luxuriant ivy, such as only Old England can show, veils and entwines the ruin, and, indeed, as elsewhere in it, seems to bind the crumbling walls together. But the writer, in his sketch of Scott's story and of this ancient castle, must, sooner or later, declare in the words of Master Lane-

ham, 'I take the case so clear that I say not az mooch az I moought. Thus proface ye with the preface. And noow to the matter.' And so, again tempted into the use of words of a contemporary narrator, George Gascoigne, he recurs to 'the Princelye Pleasures at the Courte at Kenelworth . . . as were there deuised, and presented by sundry Gentlemen, before the Ouenes Majestie.' "

We have tried to excite interest in the subject by the above extracts.

Would that it were as easy to enable our good readers to make as good outdoor work as the example before them. As American photographers, our great weak point is in our landscape work, and we must overcome it.

The prints were made by Mr. Wm. H. Rhoads, of Philadelphia, in his usual excellent style, and the mounts, new and beautiful in style, were made specially for the picture by Messrs. A. M. Collins, Son & Co., Philadelphia.

We are willing that any of our designs should be used by others who may choose to do so. They may be had of any dealer.

NOTES IN AND OUT OF THE STUDIO.

BY G. WHARTON SIMPSON, M.A., F.S.A.

A Simple Method of Reproducing Negatives—Photography at Midnight—Photography and Civilization—Apprenticeship or Studentship.

A Simple Method of Reproducing Negatives.—In the course of my experiments with collodio-bromide plates, I have taken advantage of some known facts to reproduce negatives in a very simple manner. I expose one of these plates for a few seconds under a negative and develop with pyro and ammonia. By this means I obtain a very fine transparency. I now pour on the unfixed plate nitric acid, which dissolves the image of metallic silver, and leaves a fine negative in bromide of silver. There is nothing very new in this but the application of the process. The production of the negative by exposure of the plate in the camera, and the production of a transparency by the application of nitric acid, is an

experiment which has been several times described, but the more useful application of reproducing a negative in this way is, I believe, novel, and may prove very valuable. As yet I have not worked out the matter fully; but intend to devote further attention to it. The image obtained was exquisitely delicate and perfect, but lacked intensity, and did not readily acquire vigor on applying pyro and silver. After further experiment, I shall have something more to say on the subject.

Alkaline gum will not do after long keeping.

I may also add that I have invariably found the addition of any portion of tannin with the gum greatly against the adhesion of the film, even when using a substratum; and if, to obviate this, the gum be finally washed off, although the result with freshly prepared plates is quite as perfect as if left on, keeping qualities are sure to suffer in proportion to the amount of gum so removed.

These organifiers were used with a bromo-iodized collodion, excited with usual forty-grain bath, but I see no reason why their action should not be more or less the same if employed with collodio-bromide plates.

Photography at Midnight—One of my friends on a pedestrian tour in the north of Europe writes to me: "I have just taken a very promising landscape photograph, at midnight, of a Norwegian hut, lit up both by the moonshine and sunlight; the nights are so light that one can easily read throughout the twenty-four hours." I hope shortly to be able to send you a print from this curious negative.

Photography and Civilization.—The friend just referred to finds in travelling through wild and unfrequented parts of Northern Europe, that the presence of photography or photographers may be regarded as an accurate test of the degree of civilization, the absence of photographers being a sure test of the lack of comfort and decency. He says:

"It is interesting to look out for the trace of photography in the little out-of-the-way localities that we visited, for they seemed to indicate very clearly the advance of civilization. Whenever cartes de visite were to

be seen, one was almost sure that good food and some personal comforts were to be had; but when only one or two solitary glass portraits hung upon the wall, the chance of eatable victuals was very small indeed. In all cases, however, the little pictures were treasured with great care, and occupied the post of honor among faded old prints or flaunting colored lithographs suspended round the rooms. The benefits of photography are felt, therefore, even in these primitive regions, and its influence in spreading knowledge and intelligence is so great as to reach the most distant and isolated habitation."

Apprenticeship or Studentship.—I read with much interest the report of the Committee on Apprenticeship rendered to the National Photographic Association. On the whole, I think that such a system of studentship as that proposed would answer every purpose of apprenticeship, and would prove a material boon to the profession, both assistants and employers. I must confess that with the old-fashioned narrow notions which belong to this side of the Atlantic, I could not see that apprenticeship was in any legitimate sense a sacrifice of liberty, or at least no further sacrifice of liberty than is involved in every social or commercial compact. No compact of any kind can be entered into without the establishment of obligation on both sides to do something, and the necessity of doing anything at once involves the sacrifice of a certain amount of liberty. As a rule, the shortest contract upon which any kind of service is entered upon involves the surrender of liberty for a week under some kind of forfeiture. In higher classes of service a month's contract becomes a necessity, and in others three, six or twelve months. In fact, the simple act of living under any government involves a compact implying more or less sacrifice of liberty, the subject agreeing to avoid all acts which may injure the state or his fellow-subjects, as one of the conditions upon which he is admitted to the protection of the laws. An apprenticeship is merely a compact of service for a certain period in return for tuition and opportunity to acquire skill in a certain trade or profession. Without some definite compact securing the service to the employer, he would have little

interest in imparting instruction. The obligation on the part of the employer to teach in return for service which is involved in apprenticeship is, when properly carried out, of immense advantage both to the individual assistant and to the whole community of assistants, as raising their status and increasing their value.

In the course of studentship proposed by this committee a close approximation to apprenticeship is attained, but the bond between the student and teacher is one based upon mutual self-interest, rather than upon legal obligation. If well carried out, the results of both systems will be similar, whilst the possession of a diploma signed by a trustworthy authority, setting forth period of instruction, age at the date of the diploma, special qualifications and accomplishments, social and moral habits, and characteristics of the student, cannot fail to be of material service to him in securing engagements; and such vouchers of fitness, if honestly given by capable men, must prove an immense aid to employers in determining their selections from several applicants. Whether by apprenticeship or studentship, a course of training for assistants must prove of incalculable value.

GERMAN CORRESPONDENCE.

Proceedings of the National Photographic Association—Photography and the War—Dry Plate Experiments—Consumption of Collodion in Preparing Plates—Alleged Differences in the Actinic Powers of two Stereo Lenses.

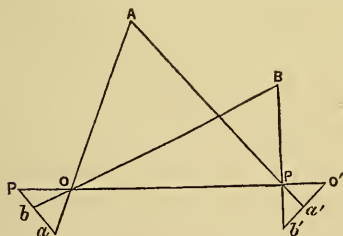
It is a difficult task for the European correspondent to furnish photographic novelties to the American reader immediately after the Exhibition of the National Photographic Association, which, during the five days of its session in Philadelphia, offered such an abundance of what is new and desirable to know. Last year I followed with admiration the proceedings of the Cleveland Convention, having the honor of being its guest. I did not believe that it could be surpassed, and still the reports inform us that the Philadelphia gathering was richer in interesting lectures, practical discussions, and important resolutions, while the Exhi-

bition itself was more beautiful than its predecessor, and the abundance of the practically important matter which was offered to the Philadelphia Convention will not only benefit the American, but the photographers of all countries.

When I contrast my correspondence with this superabundance, it appears poor to me. We in Europe have also photographic societies, in Berlin, London, Vienna, Paris, &c., but we have none which, like a broad belt, stretch across a continent. We have not even been able to effect a union of the societies of the same country. Your great national union has no equal.

With us the season is at present very dull. The Photographic Society has commenced its vacation, and concluded its session with a detailed report by Mr. Schwier, photographer of the so-called detachment for field photography, which had accompanied the German armies to France, in order to take views, for the purpose of constructing from them topographical maps. These views had frequently to be taken when exposed to the fire of the enemy.

How is this possible? is a question which has been frequently put to me, and many a one has his doubts about the matter; still in itself and theoretically it is perfectly correct, and in its principles very simple.



Suppose we select in a landscape two points, A B, the distance and position of which we wish to determine. For this purpose we place a camera first at O, and then at P, and take the two pictures, abp and $a'b'p$. The distance from O to P (the two standpoints) is exactly ascertained by actual measurement with a chain; if we now transfer the line O P to a drawing-board, in given proportions, it will be easy to paste, or attach in any other way, the pictures to the end of the line in such a manner that their distance from O and P corresponds exactly with the

focal length, and that the points, o and p' , which are visible in the pictures, are placed exactly in the extension of the line O P. When this has been done, it is easy to draw the lines $b'P$ and bO , by the extension of which the position of B will be determined at once. In the same manner we obtain the position of every other point in nature by drawing from the pictures lines through the standpoints, O and P.

There can be no question that this method is much more simple than the old one, where every point had to be determined by the aid of the surveyor's compass or the theodolite, for it is only necessary to take two photographic pictures at the end points of a line, the exact length of which has been ascertained by actual measurement; the rest of the construction of the map or plan may be done in a sheltered position; this has immense advantages over the old method, when the surveys occupied hours of time, and the execution of which the fire of the enemy made sometimes impossible.

The method is, however, of the same importance for the travelling geographer, who has not the time to stay long at the same place, and who obtains simultaneously an interesting landscape view of the country through which he travels.

Mr. Schwier had, however, to contend with many difficulties in France. A thing may be very correct in principle; the practical execution will always show errors in the beginning, which experience only can correct. It was the same with photography. How long did it take until a clean collodion plate could be produced? It is not to be wondered, therefore, that the apparatus which was constructed for field photography showed many shortcomings and proved highly defective; the lenses had a large field of view, but too short a focus; distant objects appeared, therefore, too small and indistinct, and the exact determination of the different points in the drawing became impossible. The apparatus itself was too heavy, and had the other fault that it was impossible to keep it exactly level. In order to determine the exact centre of the field of view, the apparatus was provided with cross lines, made of human hair; the cross was placed close to the collodion film, but in working with the instrument the

hairs would often break; other errors were caused by the centre of the objective not exactly coinciding with the standpoints, O and P. (See the above drawing.)

All these combined drawbacks have materially lessened the value of the results which were obtained, so much so, that at present this interesting application of photography has been abandoned. It is certain, however, that these shortcomings are easily remedied, and there is no sufficient reason to give up the process already.

Another circumstance must not be overlooked, however, and which is not so easily overcome. It is the influence of the light and the weather. The surveyor works without much difficulty on a hazy autumn day, when the distance is so much veiled that the photographic apparatus would show nothing but haze; likewise does gloomy weather or high wind interfere but little with the surveyor's work, while for the photographer, work under these difficulties becomes almost an impossibility; but even with a good light the photographer is not always able to succeed; he cannot work well *facing the sun*. The surveyor works whether he faces the sun or not, although the latter is more convenient, while the photographer, when he has to work in the open field facing the sun, is almost powerless. It has happened that the photographers were requested to take early in the morning a view of a landscape lying eastward; they had to excuse themselves, saying they would have to wait four or five hours until the sun had moved further towards the south. Under these circumstances the saving of time, which is claimed for photography, amounts to nothing. Mr. Schwier closes his report with a remark about the importance of dry plates for work of this kind, and extensive experiments have lately been undertaken in this direction. The collodio-bromide of silver process, to which Mr. Lea has devoted years of research, is now practiced by many workers in dry plate photography. I myself have worked this process repeatedly, although I did not succeed as well as I desired. The cause of my failure was blisters on the developed picture film, an annoyance with which we meet otherwise only in the positive process. The gum with which the dry

plates are coated is certainly the cause. I tried, therefore, a very weak solution of gum, and the blisters diminished, although they did not disappear entirely. It is still better to dip the plate in water after it has been gummed.

It is probable that this trouble will manifest itself less with a powdery cotton than with the horny one which is at present at my disposal. Another uncertainty of the result is caused by the addition of the acid. This is changeable, according to the strength of the acid and the nature of the cotton, and requires experiments with every new collodion which is employed.

I have recently tried to answer by experiments whether or not the chloride has anything to do with the process. I prepared a pure bromide collodion and a chloro-bromide collodion, exposed both for the same length of time, and developed; the difference was very trifling, and I can say positively that the part which the chlorine played in the process is of very little moment, and is more a secondary action, similar to that of the nitric acid in the negative bath. I feel convinced that the time is not very distant when we will have a dry process which in its results is as certain as the present wet process; still the best dry process will have this objection:

Wet landscape plates are generally developed at once and on the spot; the view or the object is fresh in our memory, and we recognize at once if all the details are represented on the plate as the eye has seen them in nature. If necessary, we can take the plate and compare it with the original. It is different with a dry plate; the plates are developed at home, sometimes only the next day; frequently we have forgotten some details in the view, the main points are still fresh in our memory, but we cannot always remember if a rock or a tree in regard to light or shadow corresponds with the reality, or if all the small parts which delight the eye are visible. To judge of all this from memory is absolutely impossible. Memory does not reach that far, and it has happened to me frequently to meet with persons who were delighted with their dry plates until they compared nature with the pictures, when they found out (which they would

have seen with a wet plate at once) how much was wanting in the picture.

Such disappointments become more pronounced the less familiar we are with the view or the object which we photograph, and the longer the time which elapses between exposure and development.

Those objections will always remain, no matter how certain the dry-plate process may become in its results.

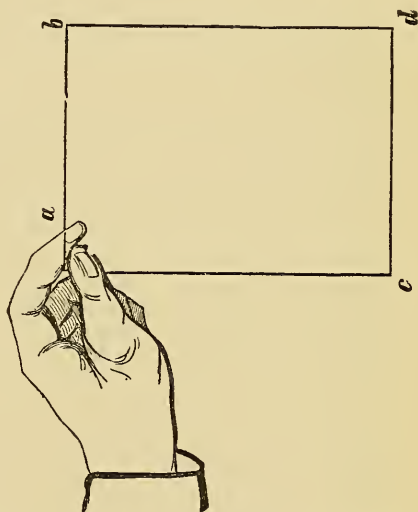
I had lately the pleasure of becoming acquainted with Captain Baden Pritchard, of the War Department, Woolwich, London, well known as a zealous and celebrated photographer. He came from Norway, where he had exposed a large number of the Liverpool Dry-plate Company's plates. He carried only a small camera for plates of carte de visite size, with a Dallmeyer wide-angled lens, and some plate-holders. The whole affair was packed in a leather bag, taking altogether not much more room than the case of a large-sized opera glass. A sample plate, which was developed in my presence, gave very satisfactory results. The above-mentioned plates are rather high in price as yet.

I have tried recently to find out how much collodion is required to coat a plate, and was surprised to notice how many plates can be coated with the bromide dry-plate collodion, which is very rich in ether. The consumption of collodion depends of course a good deal on the manner of pouring it out. Some operators pour thick and heavy, others light. For trial I used at first my ordinary collodion, containing $1\frac{1}{2}$ per cent. cotton; to coat a plate of 100 square inches surface required 14.5 cubic centimetres (about 230 grains, or half an ounce). One of my pupils, Mr. Galde, who pours very light, consumed of the same collodion, for 100 square inches, only 9.3 cubic centimetres (about 143 grains, or $\frac{1}{3}$ of an ounce). Of the dry-plate collodion, which contains much ether, I required only 7.8 cubic centimetres (about 120 grains); so that 3 cubic centimetres (46 grains) of this collodion, will be sufficient for coating a plate of triple carte de visite size.

Lately I met with a photographic error, which may perhaps occur frequently. Somebody complained that he could not obtain two stereoscopic objectives of the same in-

tensity of light. This complaint is a very frequent one; but the two lenses in question I had tried myself, and had found them exactly alike.

The gentleman made a picture in my presence, and the right side of the plate proved to be less intense than the left. I requested him to reverse the lenses, to place the right lens to the left, the left to the right; the resulting pictures showed the same discrepancy; the picture on the right was feebler than the left. It was evident that the lenses did not cause the difference; but the cause is easily explained when we remember how unequally sensitive the different parts of one and the same plate are. When we coat a plate and allow the excess



to run off over the corner *d*, we will find that generally the part *c d* is heavier coated than *a b*. This thinner coating is always less sensitive than the thicker one, as every photographer knows from experience. If now, as most operators do, the plate is placed in the plate-holder, the corner *a c* being downwards, the thin and less sensitive part will be to the *right*, and with perfectly equal lenses will give a less intense picture than the other one. That this was the real cause in the above-mentioned instance was demonstrated at once by placing a plate into the plate-holder in such a manner that the thinnest coating was to the left. We may use

this circumstance, however, to advantage; if it does happen that we have two objectives, the intensity of which is different, we should place the one with the least intensity opposite the thickest part of the coating of the plate. Otherwise it is advisable to coat the

plate as evenly as possible. In Loescher & Petsch's stereographs the right-handed picture appears frequently shorter exposed, *i. e.*, darker than the one to the left.

Yours truly,

DR. H. VOGEL.

Editor's Table.

THE PHOTOGRAPHIC WORLD for August is probably the best number we have issued. It contains four of a coming series of "Lecturettes on Modern Chemistry," by Mr. J. Traill Taylor, of London, which alone are worth a year's subscription. The series will be continued to the end, each number of the *World* having about four lecturettes. In addition are the following: Dr. Van Monckhoven's Dry Plate Process; Silvering Bath to prevent the Discoloration of Paper; The Salts of Chromium used in Photography; The Importance of Dress in Portrait Photography (continued); Bovey's Method of Keeping the Paper from Turning Yellow; Familiar Equivalents for Metric Weights and Measures; Critical Notice of Dr. Vogel's Handbook from the *Photographic News*, stating that it is "the most comprehensive, practical and altogether valuable work of the kind which has been published in connection with the art;" Fixing at Leisure, by Charles Wager Hull; Position and Composition, with three illustrations; Correspondence; Proceedings of the Hypo Club; another amusing and illustrated article by Young Chloride on Photography at the Seaside; Suggestions; Notes in and out of the Studio; Wet plates to keep a Few Hours; Intensifying by Light; Modifications of the Iron Developer; Two tints in Retouched Portraits; Cyanide as a Cure for Consumption; How to make a Still; Leaf Printing; Pinholes; How are they produced; Convenient Portable Photographic Car; Our Picture; Table Talk; Educated Photographers; All the World Over, and Editorial. The picture is from an admirable drawing by Miss C. A. Drinker: subject, "Just as I am." The whole makes up an instructive and elegant number.

HOW TO BECOME A MEMBER OF THE NATIONAL PHOTOGRAPHIC ASSOCIATION.—Send \$1 to Edward L. Wilson, Permanent Secretary, Philadelphia, announcing your desire to become a mem-

ber, and plainly giving your full address. That sum covers the entrance fee and one year's dues in advance. Employees, half rates. In return you are entitled to a copy of the constitution and the fine steel plate certificate of membership. Every photographer should be a member.

A SUBSCRIBER in Maine, who has been trying to "do" without his photographic magazine, says: "Inclosed find the wherewithal to pay for your magazine, and I think it will not run out again without renewal, for I find myself on the back seat by its discontinuance. I find I have been plodding through darkness until I have almost become mired in the mud of ignorance, *just to save \$5 a year.*"

In this advanced age a photographer soon lags behind if he neglects to read the photographic newspapers, which our magazines really are.

BUSINESS NOTICES.—Messrs. Matthews & Raymond have succeeded Mr. J. A. Johnson in the stock business, at Galesburg, Ill.

Mr. A. T. Ruthrauff is manufacturing frames, passepartouts, display cards, &c., at 315 Montgomery St., San Francisco, Cal. Try him.

Messrs. W. H. Horstmann & Sons are the largest manufacturers of picture cord in the country. See their advertisement this month.

BURNT-IN ENAMELS.—Mr. Geo. H. Fennemore, whose valued contributions to our pages have made him popular among our readers, has for several months back been perfecting himself in producing what are called the *perfection of photography*, namely, *burnt-in* or vitrified enamels, or, in other words, photographs burned into porcelain. He has succeeded admirably, as the exquisite examples shown in the Exhibition by his firm, Messrs. Suddards & Fennemore, proved. We shall have more to say concerning them presently. Mr. Fennemore is one of our young and growing photographers. So popular has his *collodion*

become among those who could get it, that he has assented to go into its manufacture more largely, so that all who want it may be supplied. Messrs. S. & F. also undertake to do coloring for the trade, as announced in their advertisement.

In our Vol. VI, page 155, we cautioned our readers against a certain J. H. Dampf, a German, who was then going about the country swindling photographers out of their silver wastes. In our Specialties at the same time we published a notice and a portrait of Dampf, from Mr. D. H. Anderson, Richmond, Virginia, one of his victims. We then lost sight of Dampf, until a few weeks ago, when a subscriber sent us Dampf's card, and stated that Dampf had been to him and solicited his wastes to refine. He recognized Dampf, and at once gave us his address, which is "with Clendenny, Photographer, Corning, N. Y."

We at once wrote to Corning, and two photographers there give him anything but a good character. Dampf getting wind of it voluntarily wrote us several letters, acknowledging his former guilt, and agreeing to pay all who had claims upon him if they would give him time. The above is his address, and the parties interested can do as they please. Others will judge whether it is safe or not to intrust him with their wastes. He has changed his whiskers since the publication of his picture. If he has also changed his habits, we have no desire to interfere with his good resolutions, but have to make these statements in justice to our several correspondents in the matter, and to our subscribers generally.

"TO MY PATRONS." If the thousands of this little work—which seems to have been a regular *hit*—continue to go out much longer as they have during the past month, the people of the United States will soon know what to expect of their photographer, and more particularly what their photographer expects of them. Photographers from all parts of the country are adopting them, and are very greatly pleased with the effect they have upon their patrons. They have been ordered even in Montana, Utah, and Texas, and still the demand continues for them.

We have arranged to print them for parties where there are more than one in the firm with the title page "To *Our* Patrons."

We use the best of cap letter paper, of various tints. Some parties want a cheaper article, but we prefer that they should be gotten up neatly and well, so that those who do use them, can take pride in presenting them to their patrons.

The chapter on "*How to Dress*" is the longest in the book, and should be read by all who sit for photographs.

Mr. A. Bogardus says of "To My Patrons:—" "A capital thing. Send me 5000 for both galleries, and put the N. P. A. monogram on the cover."

Mr. W. H. Rhoads says: "I like it well enough to order 5000."

Mr. J. A. Scholten says: "I think it an excellent advertising medium as well. Send 5000 in English and 2000 in German."

We will send a sample copy, with prices, to all applicants.

THE "Victoria" card is not named after Queen Victoria, but after Mrs. Victoria C. Woodhull, the presidential candidate of the Women's Rights party.

THE Rhode Island Card Board Company have sent us their price list. Thanks.

DRY PLATE PICTURES.—Our esteemed friend, Mr. G. Wharton Simpson, has favored us with some very interesting prints, by M. de Constant, whose coffee-gum process was given in full in our June issue. Some of them are exceedingly rich and soft and beautiful, and hard after the wet process. A small instantaneous (!) view is very pretty, indeed.

MR. J. NICHOLSON, Bostrop, Texas, wants some manufacturer to get up for sale a model head, to be used by photographers in testing lenses, collodion, &c., instead of having to call in a living subject. A good idea.

M. OZIER, of Jersey, recommends the inhalation of the fumes of cyanide for the cure of consumption, and claims to have found it effective in his own case.

MR. F. GUTEKUNST has sent us some admirable pictures of Rev. W. S. Plumer, D.D., of Columbia College, S. C. The Reverend Doctor has a great mass of white hair, and an unusually long white beard, which Mr. Gutekunst has so lighted as to give us the most exquisite detail.

MESSRS. BRADLEY & RULOFSON, San Francisco, Cal., have favored us with an admirable 14 x 17 print, of a gentleman, possessing all the good qualities of advanced photography. We regret that a series of such capital work was not exhibited by them at our late N. P. A. Exhibition.

EXHIBITORS OVERLOOKED.—Messrs. Chas. E. Wallin, Fort Wayne, Indiana, S. Root, Dubuque, Iowa, and G. H. Sherman, Elgin, Illinois, all made a very creditable show of pictures at the Exhibition, but somehow or other we neglected to notice them in making up our list published in our last issue.

THANKS to an unknown correspondent in Indianapolis, who sends us a notice of a patent being given for "saving gold," &c. We appreciate it, although, be assured, we are always awake on such matters, and know of the granting of *all* patents concerning photography very soon after they are granted.

ORNAMENTAL PRINTING.—Our readers will no doubt feel very grateful to Mr. John L. Gihon for his article this month on Ornamental Printing. His picture in our July number was greatly admired, principally on account of the border about it, and as many coarse imitations have already come to our hands, Mr. Gihon generously sets right those anxious to produce the same effect, by telling exactly how he does it.

There is one drawback in printing such pictures, besides the production of the lines, namely, the difficulty of cutting out perfect, well-shaped ovals or masks. To meet this vexation, Messrs. Gihon & Thompson are offering these "cut-outs" or masks in parcels of thirty, of various sizes, which will be found worth their weight in gold. They will meet a great want.

VIEWS IN TEXAS.—Mr. H. B. Hillyer, Austin, Texas, is attaining great prominence in his art in that State, and is one of the most live and ambitious photographers in the country. He paid \$40 for the four elegant 11 x 14 pictures by Milster in the late Exhibition, simply as examples for him to study and work up to. That is the spirit we like, and the spirit to bring success.

Mr. Hillyer has recently sent us some Texan views, which are well chosen and very interesting. Some of them are very beautiful.

MESSRS LOVEJOY & FOSTER, Chicago, have sent us a very excellent stereo picture of Washington, and another of General Thomas, taken from drawings as explained by the following from a Chicago paper:

"No stereoscopic picture can be taken by photography from any painting or other flat surface, for the illusion of relief can be produced only by projecting points. So it has been generally supposed that no stereoscopic plate could be taken

from pictures of the dead. But this delusion has been dispelled by A. F. Brooks, an ingenious and skilful artist of this city. The effect of distance and perspective, and the resulting illusion of relief and solidity, are quite marvellous. The twin pictures are first produced in India-ink, which Mr. Brooks makes a specialty, the right picture being like Stuart's, but the left one showing more of a front view. A photographic copy of this curious work of art was forwarded to Oliver Wendell Holmes, and an answer has been received in which Professor Holmes says of it: 'It is an interesting specimen of the art as showing the possibility of producing a certain degree of the true binocular effect in two drawings from a flat picture.' The effect is certainly very good.

A NEW AND BEAUTIFUL PHOTOGRAPH WAGON for outdoor work has just been shown us by Messrs. Suddards & Fennemore, 812 Arch Street, Philadelphia. It is so arranged as to enable one to use the camera inside the wagon, pointing the lens out at the back, after the wagon is backed towards the view to be taken. The inside is six feet square, and otherwise very conveniently arranged. The exterior is gorgeously painted, yet neat and pretty.

THANKS to Mr. J. W. Emery, Galva, Ill., for some very good attempts at Mr. Gihon's style of border; to Mr. A. J. Riddle, Macon, Ga., for the same thing, beautifully done, and for a large photograph of the "Wesley Oak," an old oak tree near Frederica, Ga., under which John and Charles Wesley preached one hundred and thirty-five years ago, when Georgia was a colony. Under the tree are standing Bishops George F. Pierce and William Weightman, and Rev. L. Pierce, D.D., the oldest Methodist in America. It is well photographed; to Mr. A. S. Barber, Willimantic, Connecticut, some cabinets and Victorias, showing hard effort to produce the best of work; to A. C. McIntyre & Co., Ogdensburg, N. Y., for a Victoria card; and to Mr. William Brown, Red Wing, Minnesota, for some beautiful cards to show how he has improved since his return from the Philadelphia Exhibition.

PHOTOGRAPHS OF MACHINERY.—Messrs. Gihon & Thompson have shown us some photographs of machinery, with the old buildings, &c., generally showing in photographs of such subjects, entirely obliterated, and a nice white ground instead, produced by the application of *Opaque* to the negatives. Opaque is priceless for such purposes.



Boston Public Library.

Wm. T. Bogardus

T H E

Philadelphia Photographer.

Vol. VIII.

OCTOBER, 1871.

No. 94.

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OUR PICTURE.

ABRAHAM BOGARDUS.

WE have great pleasure in presenting this month, the picture of a gentleman whose name is well known to all of our readers, and whose face is familiar to many of them. It is Abraham Bogardus, Esq., photographer, and President of the National Photographic Association of the United States. He is a man whom all who know respect and feel an affection for; a man whose whole generous and noble nature is impressed upon his face so unmistakably that "he who runs may read," and understand.

As a man, he is one of nature's generous and genial noblemen; as a photographer, none stand higher.

We are quite sure his picture will be acceptable to all, and none the less so, a short sketch of his life, gathered from facts in our possession and partly from his own lips.

"If report be true," as he said to us, he "was born in Dutchess County, New York, November 29th, 1822, a farmer's son." He "was present," but has "no distinct recollection of the circumstance."

He went to New York city when about fourteen years of age, and was engaged as a clerk in a dry goods store some seven or eight years; but he aspired to something higher than "selling tape." A friend of his employer was then engaged in making

daguerreotypes, and believing he could succeed in the then new discovery, the young Bogardus was induced to take lessons from the person above referred to, Mr. George W. Prosch.

He liked the work, and commenced business for himself in October, 1846, on the corner of Barclay and Greenwich Streets. His first camera and stand, coating-boxes, mercury-bath, hand-buff, &c., &c., a complete outfit, cost \$50.

It was a trying and discouraging fall and winter; sometimes he made only two pictures in a whole week, but by perseverance he finally found his business increasing. He had enough Dutch in his composition to give him some stability, as will be seen from the fact that he remained in that one location over sixteen years, and found himself soon doing a large business.

In the meantime the paper picture, or photograph, came in demand, and he also added that branch to the then universal daguerreotype. During all this time he stood at the camera and made almost every sitting, and to-day believes that his success is in a great degree due to the fact that *he gave his personal attention to every sitter*, as far as possible.

When the carte de visite was introduced, he leased the old gallery on the corner of Broadway and Franklin Street, formerly

occupied by M. A. Root. At this place he commenced making the card picture, and the number made was perfectly astonishing; sixty, eighty, and one hundred dozen per day was a common occurrence, and one day he registered one hundred and twenty dozen. He employed at that time upwards of thirty assistants.

Soon after, he sold out the old Greenwich Street gallery to his cashier, Andrew Jordan, Esq., now deceased. The great demand for the card picture being over, and business in New York moving so rapidly up-town, induced him, in 1869, to take a ten years' lease of the premises at No. 1153 Broadway, near Twenty-seventh Street. He now has in connection with his photographic business an art gallery, for the exhibition and sale of paintings by American artists only, which branch he has made a success. Mr. Bogardus finds the photographic business up-town a great success, so much so that he has secured the adjoining building, to enable him to produce the amount of business already pressing on him.

In 1846, when he commenced business, he had one assistant, at \$2.50 per week. His pay-roll for assistants now often reaches \$500 per week. Here is encouragement to all young men in the art, no matter how humble or how poor. Pay attention to your business, and *excel* in it, and success is sure to follow.

The career of Mr. Bogardus as President of the National Photographic Association is well known. He was one of the originators of the Association, and at its birth, in Philadelphia, in 1868, was elected the first president. He has since been three times re-elected, viz., at Boston, Cleveland, and Philadelphia, without a dissenting voice, and is the choice of the membership at large. He is impartial, just, and generous, yet firm in prosecuting his official duties, and no one can accuse him of a single act of injustice or wrong! When the business meetings lag, he has some one or more ready to occupy the time in matters practical, and does not think that men who count time by *seconds* should waste *hours* or even minutes. His continued re-election proves his popularity; and the probabilities are that the Association will know no other president so long as

he is able and willing to do the work of that office.

In matters pertaining to the interests of the whole craft, he is ever ready to lend a helping hand. When money was required to petition Congress to reduce the tax upon photographs, or to ask the removal of the stamp nuisance, or to aid in brightening those darkest days the photographers in America ever saw, as a class, namely, when we were all fighting the extension of the Bromide patent, Abraham Bogardus opened his purse and gave more liberally than any photographer in the United States. Well do we remember the eventful day, when devoting nearly our whole time to that "fight," our call to the craft for funds to go on with was not responded to.

The counsel employed had for some time been put off with promises, and at last told us they must have money or they would not be willing to go on with the case. What were we to do? Our own available funds were exhausted, and we could advance no more. Exceedingly worried at the slowness of the photographers to see their danger, and with the best of chances for success, we almost gave way to despair, when we telegraphed to our worthy president for counsel.

His answer came in a few moments: "*Go ahead!*" Check for \$500 goes to you in next mail." That decided the fate of the Bromide patent. The rest you all know.

That response shows the true character of Abraham Bogardus. That \$500 was never paid back to him. And yet, when Mr. Shaw came to him and threatened to sue him unless he recognized the validity of the "Silver-saving Patent," Mr. Bogardus again said, as promptly as before, "*Go ahead—sue!*" and he is now undergoing an expensive test suit for the good of the whole profession. Let us hope that it will shortly be decided in his favor.

In closing a letter to us recently, he says, "I am ready to help any man that will help himself, and I believe the National Photographic Association is a power in the fraternity."

During the time he has been in business, he has occupied three places only, and still occupies two of those; the gallery at No.

363 Broadway being in charge of his nephew, Mr. E. W. Bogardus.

As we have said, it is exactly twenty-five years this month since Mr. Bogardus began to make pictures, so that the appearance of his picture now is particularly appropriate, in celebration of his "silver wedding," in the silver shadow business. May he, his wife, and their children long live to see photography and its votaries grow under his hands and by his generous aid.

The negatives from which we have printed were made at the gallery No. 1153 Broadway, at our request and by the following formula:

Formula of Mr. Charles Hausrath, manipulator for Mr. Bogardus.

NEGATIVE SILVER BATH.

Nitrate of Silver, to the ounce of
Water, 40 grains.

Iodize by immersing a large plate coated with collodion, leaving it in the bath over night, when the bath is new, and then afterwards add a very few drops of C. P. nitric acid.

COLLODION.

Alcohol and Ether, . . . equal parts.
Iodide of Ammonium, . . . 4½ grains.
Bromide of Potassium, . . . 2 "
Anthony's Cotton, No. 2, . . . 4½ "

First wash the cotton with ammonia, then rinse it with water.

Seldom redevelop, but, when necessary, use pyrogallie acid and silver.

DEVELOPER.

Water, 16 ounces.
Protosulphate of Iron, . . . 1 ounce
Acetic Acid, No. 8, . . . 1 "

Vary the developer according to the temperature of the weather. Fix with hypo, sometimes adding a little cyanide. The glass used is always albumenized.

PRINTING SILVER BATH.

Nitrate of Silver, 50 grains.

Keep slightly acid with nitric acid; float 60 seconds; fume 10 minutes.

TONING BATH.

Fused Acetate of Soda, . . . 2 ounces.
Water, 64 "
Gold in solution, 5 grains.

FIXING SOLUTION.

Hypo, 4 ounces.
Water, 32 "

Leave the prints in the fixing solution about ten minutes, always watching carefully that they be well fixed. The prints are left in running water over night.

Mr. Bogardus adds, "The above is our regular formula, but it is not good unless used *right*. As I said in my annual address, in Philadelphia, 'these things must be kept in order, but brains must do the work.' "

We need hardly criticize this picture, and will not do so, further than to say that Mr. Bogardus is five feet eleven inches, and has eight living children, several of whom attended the National Photographic Association Exhibition in Philadelphia.

The prints were made by Mr. W. H. Rhoads, Philadelphia, in his usual excellent style, in the short space of one month. The mounts were made especially for the picture, with a fac simile of the signature of Mr. Bogardus, by Messrs. A. M. Collins, Son & Co., in Philadelphia. We are indebted to them for several very handsome designs for our mounts, recently. They now excel all other manufacturers. This style is one they have just introduced, and they are now prepared to supply it and many other beautiful ones to those who desire them.

In closing, we would add that we have printed extra copies of our magazine, so that parties wanting duplicates of the picture of President Bogardus can get them.

AN ADDRESS*

TO THE

National Photographic Association of the United States,

Delivered at Cleveland, Ohio, June, 1870.

BY ALBERT S. SOUTHWORTH.

Mr. President and Gentlemen of the National Photographic Association:

THREE days of the allotted period of our convention have already passed, and if I

* This address, as will be seen, was delivered over a year ago. It was ordered by the Association to be printed, but, for reasons explained by the author, a copy was not furnished the Secretary until at the last meeting in Philadelphia. We now give it place at the earliest opportunity in our power.—En. P. P.

may not be allowed to estimate the exact measure of the pleasurable emotions which each of us have enjoyed, I have no words adequate to express the perfect, and full, and exquisite delight of my own. I came here with the expectations of an ample and an abundant source of interest in studying the specimens which might be spread for our viewing. My vision has been filled to overflowing.

I came to exchange the heartiest greetings of fellow sympathy and kindness with every member of the Association, with every brother photographer I should meet. I have been received more heartily than I have faculties and power for returning. I came to treasure up the words of wisdom as they might be uttered by the speakers here. I came, not to call back those farther advanced onward and upward the hill of science and art than myself, but that I might listen to what they had long since learned. I came also to render any assistance in my power to those weary and struggling from lower down the rugged steep which we are all striving to ascend. I have been an attentive observer and a careful listener. I knew I should find it harder to keep silence than to speak, and easier to find a beginning than an end of what was important to be said.

That I might not exceed the limit of a single half hour, or risk the multiplicity of topics in detail, I propose to read an address, although it may not be in my power to disguise the fact of a lack in my case of such an education and training as would have aided me in taking a deservedly high rank either as an amateur or as a practical artist. My trials if rehearsed would be found common and consistent with the experience of multitudes in the profession and practice of photography. My purpose is to hold up before you the importance of the greatest efforts to attain the highest possible perfection in our art and the highest possible standing in our profession. The elementary manipulations and knowledge of first principles of mechanics, and of the sciences of optics and chemistry, and the all-important subjects of outline and chiaroscuro, in any detail, I cannot enter upon within my allotted time, unless to make a single allusion to the immense importance and absolute neces-

sity of acquiring perfect control of each, separately and in combination. To embrace even the important and principal subjects would require much time and many addresses.

It is fit that I express to you my most heartfelt pleasure and thanks for the opportunity of a sincere and earnest effort to benefit and further the interests and usefulness of our beautiful, refined, and wonderful art; that art which we now as a body claim as our own by profession, and in the practice of which we are devoting all our best energies and efforts. Not yet has the usual period allotted to a single generation elapsed since Daguerre announced its birth to the world. But a few months after this announcement, a French gentleman accompanied Professor Morse on his return from Europe to New York, for the purpose of introducing and practicing daguerreotyping in that city, at his special request. His method was by lectures, experiments, and illustrations by specimen-views made at the time in presence of the audience.

Professor Goraud soon lectured in Boston. His illustrative experiment resulted in his producing a dimmed and foggy plate instead of the architectural details of buildings, and the definite lines and forms of street objects. It happened to be a misty day attended with both snow and rain.

The Professor appeared highly elated, and exhibited his picture with great apparent satisfaction, that he had it in his power to copy the very mist and smoke of the atmosphere in a stormy day. Many a photographer has often wished for some natural phenomenon that might serve as a pretext for attributing to some apparent cause the faults of imperfectly understood chemical combinations, or partially polished plates.

Professor Morse had from the first great interest in Daguerre's discovery. Himself an artist, the President of the Academy of Fine Arts in the city of New York, a man of science, of liberal education, and refined culture, he had long before unsuccessfully attempted to fix the images as seen in the camera obscura. He entered at once upon the philosophical and practical experiments so nearly allied to his favorite art. This was precisely at the same time he had be-

come absorbed in his experiments with the electric telegraph, that he was erecting a glass-room and arranging a studio for making daguerreotype portraits. He encouraged the Messrs. Scovill thus early to enter upon the manufacture of silver plates, at great cost in the preparation, for said he to them, "There will be such demand for them soon, that they will be used like paper."

Professor Morse was not less sanguine of the success of daguerreotyping than of that which has attached to his name a world-wide and enduring fame and renown. Thirty years ago last winter I found Mr. Joseph Pennell, of Brunswick, Maine, assisting Professor Morse in the Professor's own building on Nassau Street. Mr. Pennell had a few months previously graduated at Bowdoin College in his native town. He had gone to New York for the purpose of prosecuting a professional course of study, and had been led to interest himself in Professor Morse's experiments, for the purpose of procuring pecuniary assistance by some employment of his leisure hours. He had been my former school and room-mate, and had written to me to visit New York and learn respecting the new art. He invited me also to join him as an associate in business for the purpose of making likenesses. He introduced me to Professor Morse, and from him we received all the information and instruction he was able to give upon the subject. Little was then known except that a polished silver surface of plate, coated with the vapor of iodine in the dark, and exposed in the camera obscura for a certain time, and then placed over fumes of mercury, would develop a picture in light and shade, the shaded parts being the black polished surface of the plate, and the lights made out by the mercury chalked upon and adhering to it. I do not remember that Professor Morse had then made any likenesses. Very clear distinct views of Brooklyn in the distance and the roofs in the foreground, taken from the top of the buildings in Nassau Street, were upon his table. I do remember the coil of telegraph wire, miles in length, wound upon a cylinder, with which he was experimenting, and which he had prepared to carry over to the New Jersey side, and extend for the pur-

pose of testing the practicability of communicating between distant points by electricity, and the use of his alphabet of dots and marks. And here, out of gratitude to him whose kind and genial traits of character are proverbial, permit me to state that with his permission we placed his name for reference upon our first business card in Boston.

The Messrs. Wolcott & Johnson were then experimenting with reflectors, and had succeeded in making pictures from life.

Mr. Pennell accompanied me from New York to Cabotville, now Chicopee, and there we commenced our career of experimenting, and began our business of daguerreotyping, on a capital of less than fifty dollars. We had the sympathy and substantial assistance of the Messrs. Ames, Chase, Bemis, and other manufacturers and mechanics and business men. We made progress in 1840 in adapting apparatus to views and to miniatures from life. For the purpose of more rapid action by increased light, we planned and made a speculum thirteen inches in diameter, thirty inch focus, and weighing fifty-five pounds. We were at that time aware as now that as much perfection was required for the best lenses for the camera, for pictures, as for the best telescopes for astronomical purposes, and consequently at as great expense. How were we to obtain an instrument which ought to be worth ten thousand dollars? Even at this day, when there are engaged in the photographic art persons of ample means, there is not, nor has there ever been made any set of lenses for the camera, which, if the same in value were arranged for the telescope, would be considered worth using. A large fortune would be required to fit up apparatus and rooms for portrait making, as well as might be done, and benefit the quality and value of the picture. Lenses necessary for everything that is possible have never been sought for, and have never been made. The spring of 1841 found us in Boston deeply in debt contracted in our experiments during the previous year. We were among strangers, without funds, and often unable to take our letters from the post-office. Postage was not in those days required to be prepaid, and business letters were usually 12½ or 18¢

cents each. Our whole expense of living was sometimes as low as seventy-five cents per week. In almost any established business, with the same industry and economy, we should have accumulated money. We had our discouragements and we had our successes. In the fall of 1841, we sent a case of our daguerreotypes for exhibition to the fair of the American Institute, and received the first premium for the best daguerreotypes. The case was sent and returned by express, and we never knew a person connected with the fair. This encouraged us and stimulated us to effort, and led us to hope to be able to keep up with, if not to lead, our competitors. In 1842, our rooms, in Boston, on the top of Schollay's building, between Court Street and Tremont Row, opposite Brattle Street, were exchanged for old 5½, now No. 19 Tremont Row, and the name of your humble servant and his worthy partner, Mr. Josiah J. Hawes, is still over the entrance.

Mr. Hawes took Mr. Pennell's place in 1843.

Improvements in apparatus and the use of bromine had helped us to use a light comfortable to the eyes, and permit us to work in about one minute in the best light in the day. We now began to electrotype our plates, improving their polish, and thus greatly improving our pictures. We invented and perfected and patented our swing polishing plate-holder. For us this was a great acquisition, for it enabled us to finish our plates with great perfection. In the spring of 1846, we made daguerreotypes of the sun in eclipse in its different stages, with the spots as they appeared through the telescope. We used an object-glass out of a telescope, kindly furnished us by Messrs. Widdiefeld & Co. This I doubt not was the first successful copy of an eclipse. We at this time made several daguerreotypes of the moon. We had also arranged our triple lenses by which we were enabled to copy straight lines, and with which we afterwards copied Allston's sketchings upon engravers' plates for Mr. John Cheney, who engraved them upon the lines as daguerreotyped, we having previously proved, by trials and experiments before the trustees, that we could keep the drawing perfectly on plates sixteen inches square.

In 1846 and 1847, we invented a camera for making several different pictures in the axis of the lens successively at different times, and this apparatus was afterwards patented. In 1850, Mr. Hawes arranged a solar camera with movable mirror or reflector, and a twelve or thirteen inch condensing lens. In 1852, we discovered the principle upon which stereoscopic pictures must be made to be free from distortion and suitable to copy as models, which neither Wheatstone nor Sir David Brewster had accomplished. In 1853, we finished our grand parlor stereoscope. In this instrument pictures appeared to most observers the size of nature. And at this day, were it not for the expense, it would be one of the most desirable methods of exhibiting photographs, and by far the grandest and most striking of any within our knowledge. In 1854, we arranged our movable plate-holder, and afterwards took out a patent for it.

This is the sliding plate-holder patent now in controversy, having once been settled in our favor, and now to be adjudged by the Supreme Court at Washington next term. This patent has had three special examinations at the Patent Office, and one finished trial on its merits, and has been abundantly sustained in a legal point of view; and so it has on every principle of justice and right deserved. You will, I have no doubt, pardon this allusion to this legal controversy.

In 1855, we practiced softening our prints by separating slightly the surface of the negative from the silvered surface of the positive paper, and by using more than one negative. We acquired perfect facility in controlling at pleasure the harshness and hardness of the prints, and rendering them soft and mellow to any desirable degree. The means used were thin glass, mica gelatine, and transparent paper, and an arrangement for admitting light perpendicular to the surface of the negative, by placing it at the bottom of a box of proper depth, so that the light should not be permitted to act except directly from the front.

The idea of photographing disputed or questioned handwriting as an aid to its identification and authorship was brought

up by myself, in 1856 or 1857, in the case of an anonymous communication to the Ledger newspaper, shown to me by Mr. J. M. Barnard, the proprietor. Photographs soon came to be used in the courts of Massachusetts, by my introduction, upon questioned signatures and writings, for the purpose of enlarging and making plainer simulated writing of any kind, as well as genuine business papers, and of bringing into convenient juxtaposition the standards and the questioned. The number of different papers presented to me amounts to hundreds in two or three years, and the sums involved or connected therewith to hundreds of thousands; and in a single case, "The Howland Will," amounted to more than two and a half millions of dollars. Besides civil questions and suits, very important criminal cases often depend on questioned writings, anonymous letters, &c. The larger part of my time for some years past has been taken up in this business. A discourse upon this branch alone might be written, but for the present, want of time forbids only this reference. I am not prepared to rehearse, or even to name all the various applications and uses of photography. It is applied now to illustrations of morbid anatomy advantageously. Astronomical records are made by it with unparalleled rapidity and exactness.

Views from the caverns of the earth, and from the depths of the waters, and from the heavens above, are placed before us. The wonders of nature, as exhibited in the snow clad summits of the loftiest mountains; the volcano, belching forth its masses of flame and liquid fire, half enveloped in its ascending column of vapor, smoke, and ashes; the majestic and foaming cataract, in its icy crystal robes of winter, dazzling to blindness by its more than diamond brilliancy, or softened by the hues of the summer foliage, pouring forth in unceasing tones its grand, sublime, and still harmonious sounds, "the music of the waterfall;" the giant trees of California, the lofty summits of the Sierra Nevada, or Mount Diavolo; the rivers and harbors; the plains, and ravines, and mining grounds, with their operations; the cities and villages, and the grand highways in various directions, and the life-imbued car,

almost in motion; the engine, held with a firm and steady hand, like a war horse impatient for the blast of the bugle. But it is not worth while to particularize; every conceivable view is presented to our vision with a reality and vividness almost equal to nature itself. The treasures of the artistic world are laid upon our tables; ancient and modern art we can study at our leisure; the fashions and patterns of the manufacturer, of things namable and to be named, are thrust before us and surround us, by means of the photographic art.

In thirty years, from a few crude experiments in the laboratory of a private chemist and artist, it has extended its various applications and uses throughout the length and breadth of every quarter of our globe. So manifold are its uses, so necessary to human intelligence have become its historic recordings, that in almost all cities and towns and villages may be found the displays and sample show-cases, with specimens in infinite variety of size, and sitting, and character, as well as individual personages and stations, from theatrical mimics, clowns, and stage-dancers, in their various costumes and postures (or without costume), to the presidents and sovereigns of the republics and kingdoms and empires of the world. The pointing index, the projecting sign-camera, or the attracting banner, direct the passing public to the rooms and saloons, the parlors and studios of the professional artisans and artists in photography; and few there are who do not possess some sample of this pleasing and attractive art.

On the first announcement of the new discovery of the hitherto unknown properties of light in connection with certain materials and chemicals, learned, and scientific, and curious minds at once eagerly sought to realize, and comprehend, and test this new and subtle and wonderful accession to science. The main facts were easily demonstrated, so very easily, that experiments were tried and results produced and exhibited within the reach of the common and uncultivated mind, and at a very trifling expense. No unusual intellectual education or attainments were required to see that a new and vast field for occupancy and improvement had been opened, and there was soon an almost im-

petuous rush, either for the pleasure of increasing in knowledge or with the hope of speculative gains. The savans and professors of known and familiar sciences sought its uses and aids in their accustomed specialties. By its sister sciences its advent was welcomed by such worthies as Herschel, and Brewster, and Talbot, and Morse, with other names of merit and renown. Attached to astronomy, to chemistry, to optics, to medicine, to natural history, and to the finer and higher arts of painting and sculpture.

In its early development and progress, it was seen that the science of optics and chemistry must be the principal sharers in aiding its operations and rendering it subservient to mankind in its finished and absolute perfection. Hardly have these sciences reached beyond the age of infancy, and most important additions have been made to each, in combination with photographic science. New properties of light have been discovered, and new and now indispensable chemicals also. Unsparing efforts have been made by names of merit, known and unknown to fame, and not less in amount of ingenuity and perseverance have been the contributions of those unknown to fame or fortune, and now, at this late day, by far the larger majority practicing photography as a profession, have little knowledge of its chemical or optical combinations or artistic requirements, nor are they disciplined in any principles of the fine arts, or in any mechanical employments whatever. Wisdom and prudence enter upon new and untried paths with cautious steps, eagerly observing every new sign and watchful of new developments, whilst youth, inexperience, and ignorance push impetuously forward, reckless of consequences, accomplishing sometimes accidental success, oftener doomed to inglorious defeat.

Into the practice of no other business or art was there ever such an absurd, blind, and pell-mell rush. From the accustomed labors of agriculture and the machine shop, from the factory and the counter, from the restaurant, the coach-box, and the fore-castle, representatives have appeared to perform the work for which a life-apprenticeship could hardly be sufficient for a preparation for duties to be performed, of a character to

deserve honorable mention. It may possibly be considered an extravagant estimate to place the number of persons employed, directly and indirectly, in photographing and manufacturing for the art, at fifty thousand in our country, but, in my own mind, it is within rather than beyond reasonable limits. Allow one in ten of this number to be in actual use of the camera and pencils, or brushes, and we have five thousand professional artists in picture-making and portraiture. Upon these devolve the responsibility of the design, and character, and finish of the picture. Mechanical manipulations, not more difficult of acquirement than in many other arts, attend upon this, and must be at the time performed by the artist photographer. For his apparatus and materials he is dependent upon those who have by life-long efforts, with genius, ability, and zeal, perfected themselves in the science of optics and chemistry, and the manufacture of lenses and chemicals. Excellence in these sciences has been attained from the experience and knowledge of former masters and from successive exertions in one progressive line, building as it were upon foundations previously properly and securely laid. Such must be placed high in the order of mental culture and knowledge. In certain specialties they are accounted geniuses of distinguished merits, and the enlightened would accord to them deserved and lasting honor. So, does it to any who worthily search for and discover the truths of science, for science is truth.

But the artist, even in photography, must go beyond discovery and the knowledge of facts; he must create and invent truths and produce new developments of facts. I would have him an artist in the highest and truest sense applicable to the production of views or pictures of any and every kind, or to statues and forms in nature, universally. I would have him able to wield at pleasure the power of drawing nature in all her forms, as represented to vision, with lights and shadows, and colors and forms, in all of nature's changes. I would have him as familiar as with his alphabet of letters. He should not only be familiar with nature and her philosophy, but he should be informed as to the principles which govern or influ-

ence human actions, and the causes which affect and mark human character. History and poetry should be to him mere *pastime*; observation of nature, cause and effect, should be his employment. Familiar with all that has been done, with a genius to comprehend and estimate excellencies and defects, he will bend his energies to rival the one while at the same time he discards the other. Thus he will save and have time for the application and use of the true principles of art, which otherwise would require to be devoted to laborious and often unsuccessful experiments. This truth is not believed, or, if admitted, is not realized; yet it is truth still, that there is no high, easy, unobstructed road to knowledge, but the same long, steep, and toilsome path which has ever led and is still ever to lead to the treasures of learning and wisdom. Golden fortunes may be inherited or acquired by a chance speculation, a mine of the precious metals may be discovered by diligent search, or accidentally opened by pulling a bush from the mountain-side, but no stock of mental culture, in any particular or in general science, was ever acquired but by dropping, hour by hour and day by day, the pence of truth into our own memories and knowledge-boxes, to be cherished and guarded by our own constant and untiring watchfulness and care; and if thus we accumulate principal continually, interest will increase in a corresponding ratio, and our savings-bank, yielding four per cent. at first, will in time return its six and ten, and afterwards an hundredfold.

We appreciate the perfection of the lenses with which we make the images of nature or art in our cameras; the perfection in the manufacture of our chemicals, glass, and paper; the variety and beauty in the style of our mountings and frames; but that which is necessary and requisite to fit one for the disposition of light and shade, the arrangement of the sitter, and accessories for the design and composition of the picture, is of a far higher order in the scale of qualifications, demands more observation and comprehensive knowledge, a greater acquaintance with mind in its connection with matter, a more ready and inventive genius, and greater capacity for concentrated thought and effort with prompt ac-

companiment in action. What is to be done is obliged to be done quickly. The whole character of the sitter is to be read at first sight; the whole likeness, as it shall appear when finished, is to be seen at first, in each and all its details, and in their unity and combinations. Natural and accidental defects are to be separated from natural and possible perfections; these latter to obliterate or hide the former. Nature is not all to be represented as it is, but as it ought to be, and might possibly have been; and it is required of and should be the aim of the artist-photographer to produce in the likeness the best possible character and finest expression of which that particular face or figure could ever have been capable. But in the result there is to be no departure from truth in the delineation and representation of beauty, and expression, and character.

But it may be asked whether the standard for the qualifications of the artist in photography is to be considered equal to that for painting and sculpture? If the aim and the purpose be the highest point of human perfection, in either art, then, I repeat, that as great as may be estimated the necessary qualifications and intellectual discipline and natural talents and genius for the painter and sculptor, precisely as much would I require for the artist in photography. The mere manipulations, the handling of brush or chisel, is as mechanical and in no respect beyond adjusting the camera or retouching correctly. The mind must express the value and mark and impress resemblances and differences. It must be instructed and directed by impressions, at the time, emanating from the subject itself.

Photographs possessing all desirable points are as scarce and valuable as the gems of India or Brazil, and the thousands of multiplied copies of the one are as common and worthless as the counterfeit glass imitations of the other. The demand for this class of photographs increases with the facilities for rapid execution and diminished value and cost. Whilst there exists this demand for pictures of a quality scarcely worthy of the name, we will not find fault with those who stand ready to supply that demand. The taste of the public is to be formed and educated before work of a higher and more

meritorious character is required; and permit me to say that, in our own country, no means will be more likely to accomplish so much towards that desirable end, directly and indirectly, as the exhibitions and meetings of this Association—directly, by raising the standard by which photographers are to estimate their own abilities and productions; indirectly, by the effect of the exhibition, in training the public eye to appreciate the differences between inferior and superior pictures.

In addressing you, at this time, do not understand me as attempting to discourage any who may have entered upon the business of photographing, or of holding up before you any impracticable theory of unattainable perfection. I would impress upon you the necessity of the most constant and unremitting attention to Nature, her changes, her variations, her moods, and her principles and productions. I suppose the picture-maker to be endowed with genius for and a mind devoted to art; to such a one no scene can be vacant or uninteresting. He will see in every place something for observation and investigation, from the simplest to the most imposing and sublime—all the actions and the varied expressions of man, under all influences; the characteristic forms, lines, and effects of health, age, condition; of beauty and deformity, he will regard with all scrutiny; all varieties of country; all species of animals, under all circumstances of repose or excitement; all of the earth below, all of the heavens above. This is his discipline of mind and vision, with fatigue and trouble at first, to be rewarded afterwards with enlarged powers and higher views, until another sense seems to have been added to his faculties, unfelt and unknown to the uninitiated. The artist is conscious of something besides the mere physical, in every object in nature. He feels its expression, he sympathizes with its character, he is impressed with its language; his heart, mind, and soul are stirred in its contemplation. It is the life, the feeling, the mind, the soul of the subject itself. Nature is the creation of infinite knowledge and wisdom, and it is hardly permitted to humanity to even faintly express nature by a copy.

With infinite perfection for our study, and observation, and models, let it be our ambition to attain to the highest point of human perfection and knowledge. The temple of knowledge may seem an imposing structure, but it is not too vast or grand for even our limited capacities. Time and opportunity are afforded us for all the exertions requisite for its construction. Upon its pinnacle we may erect our statue of fame if we do no less than is possible. I do not say to any one connected with the photographic art that you had better change your business and devote your time to another occupation; let it be admitted that you have chosen for yourselves that profession for which your education and genius best fits you; that path which good judgment and circumstances have opened before you. Having entered upon it, remove by industry and energy every obstruction you may encounter, and if perchance some formidable barrier presents itself, retreat but to choose a new position and to push on with renewed effort towards the desired goal with the least possible delay and the least possible change of direction.

Observation is the locomotive to be attached to the train of thought and engineered under your own conductorship; the power which turns the revolving wheels must be created by fuel from your own stores; your freight is to be truth, and knowledge, and wisdom, in all their purity, from the overflowing treasuries of the infinite Creator of Nature. For your harvesting he has sown with a lavishing hand. But not all is gold that glistens; truth lies at the bottom of the well, whilst straws float on the surface. For the truth we are to dig as for hidden treasures—truth, so rare, so often counterfeited or disguised by the glittering tinsel of falsehood, so often mixed with error—truth always withstanding assaults, defending itself, now here, now there; almost overwhelmed by the dust and rubbish of delusion or the blatant effrontery of impudence, empiricism, and quackery. The question, what is truth? began to be asked more than eighteen hundred years ago, and will continue to be asked as long as human nature exists.

I trust that it will not be considered inappropriate that I have chosen to occupy the

time allotted to this address in endeavoring to impress upon you the necessity of that general education which can only be acquired by persevering study, to absolutely fit you for the profession which you have chosen, or in which you find yourself engaged. I would have you respected, and worthy, and honored occupants of your studios; yourselves a grace and adornment to Nature, in her picturesque and poetical beauty, which, *in your works*, shall be spread over their walls and abound within their domain.

How proper the name given to designate the artist's room, "studio," or study! Had I, at the beginning of my remarks, quoted from Scripture, in connected, though not precisely successive words, found in the eleventh verse of the fourth chapter of the first of Thessalonians, "study"—"to do your own business," it would have comprehended all I have said, and all I can say; and I will close by reversing the order of text and discourse—a text which should be photographed upon every unoccupied blank within the scope of our vision, which should be impressed in plain and prominent characters upon every piece of work upon which we labor, which should ring as a perpetual chorus in our ears, and haunt our sleeping and waking dreams—"Study"—"*to do your own business.*"

CORRESPONDENCE.

MY JOURNAL (I am in a tiff, and you are not dear): Who is your special artist, your worker on stone, your LITHOGRAPHER? Hey! you don't want to tell, I'll bet. If you don't feel ashamed, I do, and you made me.

Those pictures, cuts, drawings, lithographs, you know, they were intended to make my little effusion more understandable, and now I have got to explain them.

You have heretofore served me some mean capers in the way of uncorrected proof, but that I always laid to the devil (printer's) and to the fact that I never could learn either to write or spell, so forgave you; but shan't this time, unless you let me have my say out, and the last word.

Did I not expressly say, referring to No.

14, "Don't let any one imagine that I have tried here to draw a face," and you let that man go and make a badly posed head, with a mean physiognomy, and forget all about the massing of light and shade, in his anxiety to make an inhuman-looking human.

But that *se* you, or grass-grown prairie (which is it?) didn't I send you a nice little drawing for that, with a luminous sky, the light catching on the waves, and coming, coming till it struck the rocks, in the lower right-hand corner? The drawing was broad and deep at once, the lithograph a shallow reflection, and that "what is it," in the middle, in a saucer, is a sheer interpolation; there was no such thing in the original. It was probably put in to determine that water, not grass, was represented, and reminds me of the anxiety to be comprehensible of those old painters, who are said to have written, this is a horse, this is a cow, &c., as the case might be, under each picture. This drawing was none o' mine, but by a lady artist of some note and ability, and ain't she going to be mad though, when she sees the caricature? But she would be madder if I gave her name.

This, dear Journal, is the personal explanation to which I rose; now I sit down, and shall be *we* again.

Our eye has just caught a rather uncomplimentary notice of a pair of Ross wide-angle stereo lenses, now in use by Mr. Pond of this city, who is photographing the Yosemite with them. We have worked with that identical pair of lenses, and are prepared to affirm that they will, and do, fill a stereoplate sharp, on architecture, which is more trying than landscape. We can't say anything about the "Dally-Rect. lens" that they are compared with, as we have not seen them, but do not doubt that these latter are quite perfect. *So are the Ross.* Should like to know what focus the "Dallys." have; the Ross are $2\frac{1}{2}$ inches, and it would not be fair to compare them with lenses of greater focal length. Some time ago an operator had a pair of "Dally." $4\frac{1}{2}$ inch, and did not like it because they would not do the work of a six inch Willard combination; that wasn't fair to "Dally." The best makers too, it will be found, vary somewhat in their characteristics, so that in some points one excels, in

other respects another is best. It is very difficult to judge of lenses; we know of no point on which photographers generally indulge in wilder expectations. Depth is a great hobby with them, rapidity another. As lenses are now made, the two qualities have an irrepressible conflict, and it is pretty certain that no basis of reconciliation can ever be found. If you have a rapid lens, don't expect depth, but require that it be sharp in one plane only.

Mr. J. W. Black, of Boston, who advanced a novel bath and bath-holder at the late convention, has thereby, it seems to this correspondent, upset the theory of chemical reduction during exposure. That any metallic silver can be formed or exist, with the immense quantity of nitric acid in the bath that he proposes, is impossible, especially as we reflect on the fine division in which such silver would be precipitated, enabling the acid to act on it with infinite facility. His process would point to a simple disturbance of the relations of the molecules of iodide to each other, in position, rather than to any reducing action by light.

Does any one, save Mr. Black himself, succeed in working the acid bath, with as fine effects as by the ordinary method? Your correspondent cannot, so far; though we make a pretty free use of nitric acid in a bath 40 grains strong, and suspect that so far from diminishing the sensitiveness it practically increases it; the tendency of the acid is to flatness, therefore the sitter can be placed in stronger, harsher light, and a shorter exposure given, within limits of course.

Who has tried Mr. Black's bath-holder? Let us hear from you. A cheap and secure vessel for silver, or other solutions, would be a boon to photographers. We don't try the wood ourselves, because we have heard that wood sometimes cracks, and fear it would, in that case, let a valuable solution out to waste, and hurt our under neighbor's dry goods.

In the *World* of July last was a communication signed "A Lady Photographer" which ought to catch every eye and cause a pause. The thing alluded to was apparent to all. Indeed, many of the brethren seemed to come for no other purpose than to have what they call a "good time." We feel

this to be a delicate subject to touch upon publicly. There is the dignity of the Association to be maintained, and if we become our own accusers, it will be asked, who will respect us? But truth and purity are before respectability—its very foundation indeed—and if we desire honor, we must so conduct ourselves as to deserve it; besides, who could wish to emulate the hypocrisy of those societies who refuse to examine the scandals of their members, lest the whole body be disgraced? In ancient agriculture, it might have done very well to let the wheat and tares ripen together, but we moderns have found it best to pull up the weeds as fast as they are discovered.

When we come together, let it be remembered that each has the honor of all the rest to maintain, by keeping his or her own self in all purity. When we truly respect ourselves, all the world will respect us, and not till then; and till then no right-minded person will wish the gloss of silence to be passed over this useless time-wasting, strength-destroying, brain-muddling, beer guzzling and wine bibbing.

We have a relief association; we talk of a fire insurance company; now who will join me in a National Photographic Temperance Association? We need not have any public organization, need not spend any time in discussing constitution or by-laws or electing officers. Our good Editor will doubtless open a page in the Journals; let all so disposed send their names to be printed thereon as resolving, during their attendance on the future conventions, their journeying there or thence, to their homes, to refrain entirely from the use of alcoholic drinks, including beer.

It would of course be good to make a broader pledge, and include our whole lives, but the convention week is the time when we are brought close together, when the conduct of one is peculiarly affected by his relations to the whole, and should be especially bound by those relations; and for the rest, we are quite willing to let the seeds of self-restraint, self and mutual respect, sown through this week, spring up and blossom in each heart, through the after-life as it may.

W. J. BAKER.

BUFFALO, N. Y.

THE USE OF POTASH FOR CLEANING PLATES.

IN Mr. A. S. Southworth's article on cleaning glass—published on page 264, August issue, of the *Philadelphia Photographer*—I find he has recommended the use of *strong* boiling potash. My own experience with this substance has been such that I should not recommend it, except in extreme cases, and then only with *great* care. Of the many objections to its use, I will now name but two.

First, its solvent property, which acts very powerfully upon some of the constituents used in the manufacture of glass, especially some of the best brands for photographic use. So great is this action, that practical chemists find it necessary to keep potash solutions in bottles constructed of peculiar glass, to avoid having the glass stoppers sealed in by it, the stopper and inside of the neck becoming, as it were, *fused together*, even with *cold* solutions, which we can readily understand would act much more energetically when heated to a temperature of 212°.

Some years ago I had occasion to experiment considerably in the preparation of glass for use in mounting microscopic objects. It was necessary that the glass should be absolutely free from all extraneous matter, and one of the methods which I adopted for the end in view was immersion of the glass for a few moments in a boiling solution of potash, or rather placing the glass in a cold solution and raising the temperature to the boiling-point. The result was, not only the removal of foreign matter, but also the removal of the polished surface of the glass. The solution which I used may have been *stronger* than Mr. Southworth would recommend, though he gives no standard, save "a very strong solution."

The other objection which I would now bring forward, is to the use of *any* boiling solutions in the preparation of glass for photographic use.

Every one accustomed to the handling of glass has observed the defects generally known as "blisters" or "air-bubbles," but perhaps all have not observed the number or extent of these defects as seen under even a comparatively low power of the microscope.

Many of these, invisible to the naked eye, prove "weak vessels" when raised to the high temperature necessary to cause ebullition in so dense a fluid as strong solution of potash. Whether this results from the imprisoned air or gas which they contain being expanded by heat, so as to exert a pressure greater than the surrounding mass can withstand, or from a lack of material, which they occasion in the body of the glass, may be a question, though I believe it due to the first named of these two possible causes; in proof of which I inclose a slip of microscopic glass, which was treated in the manner stated.

By examination under the microscope, you will observe that many of the "blisters" are merely fractured sufficient to allow the escape of the imprisoned contents, while others appear as though there had been a violent explosion, entirely removing one side of the cavity, and some are yet covered by the shattered wall, which may be lifted off by the careful use of a sharp-pointed instrument.

The most expeditious, and at the same time satisfactory, method which I have yet found for removing the sharp or cutting edge of all ordinary sizes of photographic glass, is to hold a plate in each hand and quickly draw the lower angle of the edge of one plate against the upper angle of the edge of the other as they are held nearly flat before the operator. Then the plate which was drawn across the upper angle of the other is in the same manner drawn along its lower angle, without turning either plate. We thus remove the edges from one side of *each* plate at *each* motion. This repeated, and we have the four edges or eight angles, each of two plates (sixteen in all), done in eight motions.

O. G. MASON.

BELLEVUE HOSPITAL, N. Y.

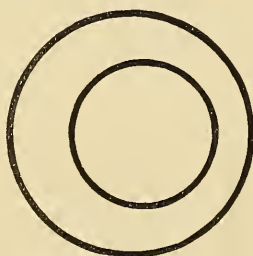
THE STEREOGRAPH.

(Continued from page 286.)

I BELIEVE I remarked in the article preceding this that a stereograph of a landscape may be constructed by the artist; but the contrary of this has been asserted by other writers on this subject. I mean by this ex-

pression, that the stereographic construction is a *possibility*, although I may admit the difficulty of the operation. With any lens whatever, with which the stereograph may be taken, the differences of distance between the corresponding points on either picture of the stereograph vary exactly according to certain circular functions as the distances of the real objects from the centre of either lens. If, therefore, these distances (and of course they can be obtained by absolute measurement) are known, then by the application of the trigonometrical formulæ, on which they depend, the differences of distance of the corresponding points on either picture can be computed to most refined accuracy, and then from the computations the distance thus determined can be located on the sheet on which the construction is to be effected.

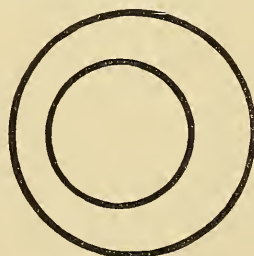
This knowledge enables us to construct with great facility stereographs of geometrical solids, or of regularly shaped figures; in fact, artificially constructed stereographs preceded the photographic stereograph, and at the time of their first appearance such stereographs excited the admiration of all lovers of science. It seems wonderful, when we look at two sets of two circles each, one within the other, either strabonically or with the aid of lenses, to find that they represent a frustum of a cone, standing either on its broad base, or on its smaller base, in accordance with the condition of the construction or the observation of the phenomenon either with the naked eyes alone, or with the stereograph. Let us make such a construction in order to illustrate the subject in question:



The distance between the centres of the two inner circles is 2.355 inches, whereas the distance between the centres of the outer

circles is 2.5 inches; the difference of these two quantities gives 0.145 parts of an inch. Now this quantity is sufficient to produce considerable depth, and consequently a great amount of solidity, when the two sets of circles are superimposed strabonically. When so viewed, they give us the perception of a deep tumbler standing on its narrow base. If you will take the pains to understand what I said in the last article on this subject, you will inevitably comprehend the reason of this wonderful phenomenon; for, inasmuch as the distance between the centres of the outer circles is greater than that between the centres of the inner circles, the rays of light from the centres of the two outer circles, as they proceed to each eye obliquely, will cross or intersect each other at a point nearer to the eyes than the intersection produced by the rays from the centres of the inner circles; and so of the rays proceeding from corresponding points on any part of the larger circles, they will cross nearer to the eyes than those proceeding from the smaller circles. This being the case then, the whole of the large circle will stand nearer to the eyes than the small circle, and thus give the perception of solidity. The amount of solidity depends *entirely* on the quantity 0.145, or whatever this concrete quantity may be; if we increase the amount, we increase the depth of the tumbler; and *vice versa*. When the two centres of the two circles coincide, the intersections of the rays will coincide, and consequently the picture produced by superimposition will be quite flat.

Supposing now we were to superimpose the two sets of circles by means of a stereo-



scope, the phenomenon perceived would be a tumbler standing wrongside up. How is this?

It is simply the result produced by an astronomical telescope, which inverts the image of every object regarded through it; the stereoscope is in reality nothing more than the object glass of such a telescope; and all that is required to make the analogy complete is to supply the stereoscope with an erector.

frustum on its base, that is, the apex is nearest to the eye.

In the second figure the order of every part in the preceding is inverted, thus giving the perception of the phenomenon produced by the stereoscope on the first.

The amusement to be derived from the artificial construction of stereographs is very

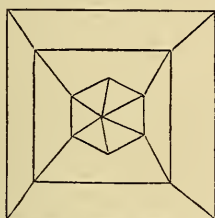
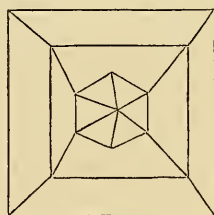


Fig. 1



The two annexed figures give a beautiful illustration of that which can be effected by artificial construction. Let us suppose that we observe them strabonically; then the first one represents by superimposition, first, a large or outer frustum of a quadrilateral pyramid standing on its larger base; secondly, an inner frustum of a quadrilateral

great; and the variety depends on the originality and imagination of the artist.

STEREOSCOPIC PRINTING.

If the reader thoroughly comprehends the subject already explained, he will have no difficulty of conceiving what is meant by stereoscopic printing. This is an interesting

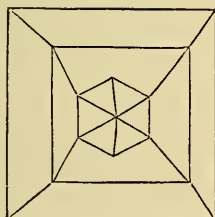
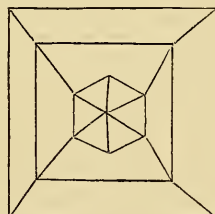


Fig. 2.



pyramid standing on its smaller base, whilst its upper base coincides with the smaller base of the preceding frustum; finally, an hexagonal pyramid stands within the smaller

branch of stereoscopicity, and affords a fund of amusement to the amateur, as well as practical printer. The following is an example of such printing:

THE GUARDS ON THE RHINE.

A sound is heard from door to door,
Like clatt'ring sword and cannon roar;
The German Rhine calls loud for aid:
What man will swing the helping blade?
Be unconcerned, dear Fatherland,
The Rhine with Guards is strongly manned!

A hundred thousand hear the cry;
And lightnings flash from ev'ry eye;
The German youth gird on the glaive,
Their country from the foe to save.
Be unconcerned, dear Fatherland!
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The preceding is a stereograph, and the following is a description of its appearance when viewed by the naked eye: The distance between the A and the A, as also between the L and the L of the first two lines, is equal, but greater than that between the T and the T, as also between the W and the W of the next two lines; and this latter distance is greater than the distance between the next two lines in succession. Now the consequence will be that the first two lines will stand out and up from the paper, when superimposed, quite above the next two lines, which in their turn stand out above the next two, and the title. The printer will observe that there is a difference of an em quad between the distances above-mentioned. In spacing between the words the greatest caution is required, in order to preserve regularity, not to mix the spaces, that is, if you start with 3-em spaces, not to use any 4-em or 5-em spaces amongst them, for the slightest irregularity in this respect (an irregularity which is not at all, or scarcely perceptible to the naked eye) is magnified to a great extent by superimposition; even spaces that are new, when mixed with those that have been used, and are slightly oxidized, make the difference perceptible.

This slight difference in spacing shows so distinctly a difference in the superimposition, that we may correctly assert, that the eyes can detect a deviation from parallelism by superimposing two lines, that appear to be parallel, and which without superimposition cannot be determined to be otherwise by simple inspection. This property is so refined and so easy of application as to become the most certain, the quickest, and most reliable means of detecting counterfeit bank notes, forged names, &c. For if the corresponding halves of two bills from the same plate be inspected in the stereoscope, the picture will be perfectly flat; whereas if a counterfeit bill be placed side by side with a good bill, the picture will not be flat; on the contrary the greatest irregularity will become visible after a while, some parts standing up here, and being depressed there. Notwithstanding the great facility in making this diagnosis, it is necessary to state that some practice is required; for those who have had to deal with such operations

know well the difficulty which the untutored experience even in obtaining relief when viewing an ordinary stereograph. After a little practice the banker would find this method his never-failing bank-detector.

On Various Photographic Subjects.

BY M. CAREY LEA.

1. WHICH SIDE OF THE GLASS SHOULD BE COATED?

WHEN plate-glass is used, the finest and most perfect side should, of course, be selected. But in the case of blown-glass, most of which is perceptibly bowed, the question arises: Should the convex or the concave side be coated? Some careless operators do not pay any attention to the point at all, but coat the best-looking side, whether it be convex or concave. Generally, however, the concave side is selected, and for the reason that then the pressure of the spring in the frame tends to correct the curvature, whereas if the convex surface be collodionized, the pressure tends to exaggerate the curvature.

This method of proceeding is quite correct for portrait work, and for taking the fronts of buildings; in a word, for all cases where the centre of the object is nearer to the lens than are the sides of the object.

But in landscapes it most commonly happens that the central objects are more distant than those at the side. When this is the case, it is evident that if the plate has been coated on the concave side, then its curvature greatly increases the difficulty of getting the whole of the picture into focus together.

Whereas if the plate be coated on the *convex* side, then its centre is brought nearer to the lens, and the shorter focus of the distant objects is favored by the form of the film.

Consequently no general rule can be given as to which side of a bowed plate should receive the collodion; the concave side being best for one class of objects, the convex for another.

2. PAPER THAT WILL KEEP AFTER SENSITIZING.

In giving, in the second edition of my Manual, directions for preparing paper that will keep after sensitizing, I was not aware

that a short time before a somewhat similar process had been published, using another vegetable acid for the same purpose.

Nevertheless, I believe I am entitled to priority in the idea, as the first proposition for adding a vegetable acid to the positive bath was made by me more than three years ago. (See Manual, 1st ed., p. 197-199.) I then proposed it for enabling paper for printing positives by development to be kept, showing that paper so prepared could be kept for a fortnight, instead of needing to be used within a few hours after preparation. If paper for development could be kept for two weeks, it was evident that paper for ordinary positive printing could be kept still longer. This I intended then to try, but excessive occupation in other branches of photography prevented me from doing so until last winter, and it consequently happened that a method nearly identical appeared a short time before mine was published. The principle, however, was just the same, and the mode of operation nearly the same as mine of three years since.

3. INFLUENCE OF GUM ON THE SENSITIVE FILM.

The influence of gum on the sensitive film is quite remarkable, and in some respects differs from that of any other substance. If it be used alone, it imparts a very high degree of sensitiveness, but gives thin, foggy, indistinct images, difficult to intensify. The character of these images depends also to some extent on the nature of the pyroxyline used. If this be of an intense character, and the collodion has been long sensitized, the images are rather better.

In my own work I have, however, never been able to get satisfactory results with gum alone. There seems a need for some other substance, giving more intensity, even if (perhaps consequently) less sensitiveness. When gum is used with such a substance (as, for example, pyrogallie acid, tannin, &c.), we get a more useful result. We do not, however, combine the qualities of the two; we only average them. We cannot add the sensibility of the gum to the intensity of the pyrogallie acid, but in adding this latter we lose just as much in sensitiveness as we gain in strength.

The interaction of chemicals in the dry processes is often very curious. A collodion that is not suitable, if added to one that is, may not simply dilute the latter, but may greatly injure it, although salted in exactly the same manner. I found this once with Dr. Liesegang's papyroxyline. I prepared some collodion with it, salting precisely in the same manner as usual, and tried mixing it with some other collodion known to work well in the chloro-bromide process. The result was very bad; had the good collodion been diluted with as much alcohol and ether as corresponded in quantity with the other collodion added, all would have gone right.

The influence of gum in softening the image and bringing out detail in the shadows is perfectly invaluable. A dry plate made with tannin only, compared with one made with tannin and gum, is altogether inferior. The relative proportion best to employ will always depend upon the character of the collodion. The best plan is to use gum and sugar, each ten grains to the ounce, and to add just enough tannin to afford the necessary intensity. The trial should be commenced with two grains of tannin to the ounce; if this does not enable the operator to obtain intensity without difficulty, the proportion should be increased just sufficiently to attain this result. Tannin, however, as a preservative, is greatly inferior to

4. PYROGALLIC ACID.

The result of the trial of a vast number of substances as preservatives was the finding of two better than any other,—pyrogallie acid and a preparation of cochineal, each best in certain particular cases.

As to the proper proportion of pyrogallie acid, I have tried both half a drachm and also one drachm of sixty-grain solution to eight ounces of bath, that is, approximately half a grain and one grain to the ounce. Quite recently I have carefully compared these two proportions against each other, and could not find any difference whatever in the result. As it is never desirable to use an excess of material, I therefore recommend the half drachm, or about half a grain to the ounce of preservative.

As pyrogallie acid is far from being a permanent substance, I thought it interest-

ing to test some alcoholic solution, which had stood aside for about eight months, with some freshly prepared. The older solution looked a little darker than the fresh; it had, therefore, certainly undergone some change, but it proved to give equally good dry plates.

The Executive Committee of the National Photographic Association.

In making up our report of the proceedings of the National Photographic Association we overlooked the Executive Committee, who had several meetings in Philadelphia during the Exhibition and after its close.

The regular quarterly meeting will be held early in October. We make the following extracts:

At the annual meeting of the National Photographic Association, held in Philadelphia, Pa., June 7th to 11th, inclusive, A.D. 1871, the following were elected as the Executive Committee for the ensuing year: V. M. Wilcox, W. Irving Adams, Wm. H. Rhoads, A. Hesler, J. Carbutt; and *ex-officio*, A. Bogardus, Albert Moore, and Edward L. Wilson.

The committee met for organization June 8th, Mr. Wilcox serving as Temporary Chairman, and Mr. Wilson as Secretary.

Owing to the dissatisfaction which appeared to be then existing among the members of the Association because the majority of the committee were stockdealers, Mr. Rhoads moved that the committee resign in a body. The question was discussed at length and finally carried, the resignation already published having been prepared to offer at the meeting of the National Photographic Association next day, and signed by the re-elected members. The Secretary was then instructed to present it to the Association.

A special meeting of the committee was held Friday evening, June 9th, Mr. Wilcox in the chair.

The Secretary reported having read the resignation to the Association and that it was *not accepted*, the vote against it being large and emphatic.

The annual election of officers of the committee was now proceeded with. Mr. Adams was re-elected Chairman, and at once resigned. The resignation was accepted. Mr.

Bogardus was elected in his place. Mr. Wilson was re-elected Secretary, and also resigned, when Mr. Rhoads was elected in his place, so that now the officers and the majority of the members of the committee are photographers.

The Treasurer was instructed to report the balance in his hands at each meeting of the committee.

GERMAN CORRESPONDENCE.

Landscape Photography—Cameo Medallion Pictures—The Photographer to his Patrons—New Principle of Ventilation of Studios.

THE full and interesting report of the meeting of the National Photographic Association, which is now before me, induces me to make a few further remarks from a German standpoint, and which may serve perhaps to harmonize some differences of opinion. To begin with landscape photography, Mr. Browne states, in his very instructive report on photography in America, that in Europe landscape photography is of as much importance as portraiture. Such is, at least in Germany, by no means the case. Landscape photography represents only a very small fraction of our photographic activity, and I feel inclined to doubt that it is any better in England or France. England has many able landscape photographers. I will only mention Messrs. Bedford, England, Wilson, whose names just recur to my memory; but the number of those who devote themselves to landscapes is very small when compared with the number engaged in portraiture.

For landscapes which are artistically executed, such for instance as Bedford's, there is, I believe, a ready sale in England. A few peasants' huts, a grove, a forest path, will find there not only admirers, but also purchasers.

In Germany this is unfortunately different. The fine artistic effects are admired as much as in England, but they are not bought. The majority of those who understand anything about art consider photography as a mere mechanical calling, and the pictures as a production of the same; and persons who will spend hundreds of dollars for oil paintings or copperplate en-

gravings, will not spend a dime for a photograph; it is below their level. Pictures which are bought solely on account of their artistic and effectful execution, no matter what object is represented, are therefore very rare in Germany, and the few landscape photographers which we have confine themselves to making views, *i. e.*, pictures of the resorts of people travelling for pleasure, and places of renown in the large cities; generally a small sized picture is preferred. For stereos there is here much less demand than in America, and the quality is not as good.

From what I have seen of American landscape photographs, I feel free to confess that they are in no way inferior to our German pictures. I have expressed this same view elsewhere.

While speaking of landscape photography, I will give a few practical hints to the travelling photographer. These gentlemen frequently take some articles too many, or of others insufficient quantities, on their wanderings; and on long excursions, in little-civilized countries, this may give rise to great annoyances.

From my own experience, I give the following rules: For every square foot of plate about half an ounce of collodion is necessary; a square foot of plate will consume also very nearly half an ounce of bath solution, and when we use a developer of a strength of five per cent. with two and a half per cent. glacial acetic acid, we will require for every square foot of plate nearly half an ounce of sulphate of iron and a quarter of an ounce of glacial acetic acid; of varnish about three-quarters as much as collodion is necessary. The consistency of the collodions and the varnishes differs of course; but we can hardly go amiss if we provide ourselves with one and a half times to double the above-mentioned quantities for each square foot of plate.

Landscape photographers very frequently run short of filtering paper; cotton, or still better gun-cotton, forms an excellent substitute; a piece of gun-cotton placed into the neck of the funnel will last for a long time, and does not exercise any deleterious influence on the nitrate bath. Instead of pasting the labels on the negatives, bottles,

&c., with gum arabic, I take strips of albumen paper, which sticks just as well.

I myself am just at present engaged in landscape photography in a country which has been very little travelled over, the central part of the Carpathian Mountains, on the border of Hungary and Galicia. They are interesting mountains, not unlike your White Mountains, where last year I spent such happy days with our friend Kilburn. The general character is, however, wilder, and the summits are higher, reaching 8300 feet, with steep and rugged sides, making the ascent very difficult. As a peculiarity, I must mention the lakes which are high up in the mountains, and which, with the wild surroundings, the pointed rocks with the white masses of snow in the clefts, make a solemn and sinister impression. Still more peculiar are the mountain waters; they are almost absolutely pure; not a trace of chlorine can be found in them, and nitrate of silver dissolves in them without producing a trace of cloudiness; in short, such is the water which the photographer wants; and yet these mountains have never before been treated to the smell of collodion. Photographers have been and are in China and Japan, in the Himalayas, the Yosemite Valley, the Mammoth Cave, and Greenland; but it seems that I am the first one who photographed the Carpathian Mountains, and I have the delightful certainty that my pictures, poor as they may be, are certainly the only ones of their kind, at least for the present.

A kind of picture which at present is much in vogue in Germany seems, from what I have heard, little known in America. They are called cameo-medallion cards. The style cannot be called exactly new, for already six years ago similar pictures made their appearance. The principal peculiarities are that a card, Victoria or cabinet, is printed with front mark in such a manner that the margin only remains white. Otherwise the picture is treated in the ordinary manner. When the print has been mounted and becomes dry, the central part of it is pressed out with an oval press in such a manner that it stands out in relief, like an oval medallion. The margin may also be printed gray or black, a practice much in

use in America with all kinds of pictures. I cannot say that these pictures look better than others; and they have the disadvantage that they are easily broken, and can only be well preserved in an album. The public, however, wants from time to time something new, and the new is not always beautiful. The press with which these pictures are pressed is an ordinary wood press containing a mould of hard beechwood. The mould consists of two pieces; the lower one has a raised oval which fits exactly into the upper oval depression.

Your book, "*The Photographer to his Patrons*," I have read with much interest. It is short, practical, comprehensive, and written in a popular manner, which cannot fail to have effect. The public makes such curious demands on the photographer, and shows often so little appreciation of his arrangements, that we never get done explaining, and things which have been repeated a hundred times over again, as for instance, about the use of the head-rest, dress, &c., have to be stated anew with every sitter. Such a book saves the photographer much time and trouble by answering all such questions.

Unfortunately all these fine rules will not remedy certain points. It is the expression of the face. At the moment when a person is requested to sit perfectly still his features assume frequently a foreign expression. He looks as if he were staring at a passing railway train, and when the exposure is rather long and the atelier very warm, a weariness and fatigue shows itself in the face, which in the picture is doubly unpleasant.

The question, how to ventilate our ateliers in hot summer weather is still, unfortunately, unsolved. For a time we tried to reduce the temperature of the studio by pouring water over the skylight; the effect was very satisfactory, but it was soon discovered that the glass was injured thereby, becoming dull and losing partially its transparency. Bad water may have been the cause. A better way is the direct introduction of cool air. A very interesting machine has been invented for this purpose; it is the *Windhausen Air Ice Machine*. The invention is patented, and the patent has been sold in the United States. The

first specimen has recently been finished, and is intended for New Orleans. The principle of the new invention is as follows: When air is strongly compressed it becomes very much heated, so much so in fact that it will ignite a piece of tinder, as is shown with the little instrument called the pneumatic fire apparatus; compressed air readily parts with this heat, communicating it to surrounding bodies, for instance, water; if the compressed air, after it has been cooled, expands again, it will take up the heat which it lost in cooling, and causes an enormous degree of cold. If, for instance, the air by compression was heated to 212° Fahrenheit and cooled down to 68° Fahrenheit, then the air has lost 212 less 68, or 144 degrees of heat; when now the air which has now a temperature of 68 degrees suddenly expands again, it will lose 144 degrees more and become reduced to 68 less 144, or 76 degrees below zero; when this air is forced amongst metal vessels containing water, the latter will congeal in a few minutes. The Berlin machine furnishes ice by the hundred weight. The air is compressed by a steam engine.

The matter has caused here a good deal of excitement. Several prominent builders have proposed to use this apparatus in a simpler form for cooling and ventilating public buildings, halls, and theatres, in which the heat becomes sometimes unbearable. Perhaps it might be employed also for the ventilation of photographic ateliers.

Our summers are not as hot as yours; still the temperature has in my studio frequently risen to 100 degrees Fahrenheit. How, under these circumstances can any one be expected to look pleasant during exposure?

Yours, truly,

ZAKOPANE,

DR. H. VOGEL.

IN THE CARPATHIAN MOUNTAINS.

UNDER THE SKYLIGHT.

BY ROLAND VANWEIKE.

No. IX.

PECULIARITIES OF FACES.

"WHY, yes, I've seen so many peculiar faces while I've been away that I didn't know but I had become quite proficient in their management, as I have been contin-

ually making photographs of them wherever I have been."

That's the way to do it, Focus. Under the skylight is not the only place to study faces, but we can improve ourselves by studying them wherever we see them. I was in hopes to have had an opportunity to talk over the lessons suggested by the grand display of photographic work at the National Exhibition; but I have no doubt you profited by it, nevertheless, and have also improved yourself by observation and some experience during your summer vacation?

"Yes, I think I have. I've dabbled some in photography, and have not been unmindful of the faces, especially the pretty ones; and some of them, I must confess, possessed *peculiarities* that were decidedly interesting. I have thought many times of the Exhibition and what I saw there, and prominent among the memories of that occasion was the thought, so fitly expressed and so charmingly illustrated,

'Beautiful faces they that wear

The light of a beautiful spirit there.'

"But I thought I must come back to you and to the stern realities of life, and see what was to be done with those *long noses, squint eyes, lantern jaws*, and I don't know what not!"

I see, Focus, you have been under good influences while away, and I think some of those *peculiar* faces you have seen have made an *impression* that will *develop* into something one of these days. There is no better evidence of it in a young man than to see him becoming poetical. As for the long noses, &c., I have concluded to facilitate matters by noting down the treatment of those *peculiarities* suggested in our last lesson, as it might require some time to cover them all in actual practice.

"That will suit me; I can study them out and apply them at my leisure."

Thin faces with high cheek-bones were disposed of in our last lesson. *Retreating forehead and prominent nose* admit of but little latitude in posing. Nearly a front view is the only one at all favorable, and in most cases the only one to give satisfaction.

Crooked nose, generally two noses. Close observation shows that many people have two faces—not that they are what is termed

in a hypocritical sense "*two-faced*!" But the two sides of the face present a very different-looking picture; and the feature most concerned in this peculiarity is the nose.

Now, one side of such a face will generally be much more favorable for the sitter than the other. You will notice, by getting views each way, that you have two distinctly shaped noses, and the point is to choose the best. Generally the side of the face towards which the nose evinces the greatest partiality is the most favorable. This matter of the nose is one that requires close attention and observation, if you would select the best view of a face. It is amusing sometimes to witness the astonishment of people when told they have two noses. You have no doubt noticed a great difference in the pictures of General Grant that show different sides of his face; and yet, if you notice carefully, you will find that difference to be mostly in his nose.

Now we come to the *pugs* and *turn-ups*. Their cases are very similar, as far as the treatment they require is concerned. A face afflicted with either of them will scarcely admit of anything else than nearly a front view. Where either presents the nostrils very conspicuous, it is well to give as much three-quarter view as the case will bear, and depress the head, or raise your camera all that will be admissible. Such faces should be lighted well from the side, keeping the top and front-light subdued; this gives relief to the features lacking prominence, and tends to soften and harmonize them.

Large Mouth.—This member is not difficult to manage if you can keep it shut when you want it; it requires a view well three-quarters or profile, provided the other features will admit of it. Perfect repose is necessary for a large mouth, as anything towards a smirk will exaggerate its proportions immensely.

Large Ears.—These are said to be evidences of generosity, though there are always vulgar people enough who see in them a kindred to a certain four-footed beast, which is usually something of a clown, and has a strong will of his own. Be careful never to make a direct front view of a face set between a pair of large ears; put one of them out of sight, and let the other lose its

prominence against the head, instead of being cut out against the background.

Staring Eyes.—This is a difficulty hard to overcome sometimes. The most that can be done is to prevail upon the sitter to relax the muscles, if possible; it is generally the result of a peculiar nervousness that comes over the person at the time of sitting. Fixing the point of sight quite low will relieve such eyes very materially.

Weak and Squinting Eyes.—These also are difficult, but can be dealt with most successfully in a subdued light, or with the eyes turned well from the light. A convenient method of treating such subjects is to let the sitter appear to be reading, or in some position with the eyes cast down.

Cross-Eyes, or a Cast in one Eye.—These require especial care and study in their treatment. The point to be gained is to so direct the eyes as to give them the appearance of being straight. In cases where the eyes cross, or both turn in towards the nose, the best way to overcome the difficulty is to give the sitter a view well towards a profile, and fix the point of sight so that the eye that is seen will seem straight. The same course may be pursued where only one eye is affected. But in many cases the sitter may be posed without reference to the eyes, only not allow them to be fixed on any particular object till you are all ready; then move your point of sight gently one way or the other till the eyes assume their best position. With a three-quarter view of the face the sitter will sometimes look directly towards the camera, and again off in the direction of a profile view, to give the eyes the appearance of looking directly forward. Equalizing, as far as possible, the difference in the refractory optics, is the most we can do where both are visible.

Sunken Eyes.—Require a particular arrangement of light. Soften your top-light, using mostly side-light; or use a reflector to throw the light under the brows. The face should be turned well towards the light, and raise the chin as much as it will bear. A thin, angular face, generally accompanies such eyes, and an arrangement of light giving very soft shadows will be found favorable in every respect.

Very Light Eyes with Sunburnt Face.—

The difficulty in this case is to get any eyes at all. How many pictures we see from such faces where the eyes are an utter blank. The eyes must be turned from the light, letting them come well in shadow; give a good full exposure. Direct light in a light eye burns it all out.

Retreating Chins.—Will require about the same management as retreating foreheads.

Long Neck.—This feature in a graceful sitter, especially a lady, is often not objectionable; but frequently the subject is awkward and uncouth, and dressed apparently so as to give the greatest prominence to every objectionable feature.

A position turning the head away from the direction of the body as much as possible, with the head inclined forward or to one side, will tend to modify its proportions, and give grace and symmetry. Avoid an upright, stiff position, in such cases, and use your best endeavors to study out the position adapted to your sitter. In all these difficult cases the sitter will often insist upon some particular position or arrangement at variance with what you know to be best adapted to them. The best way is to make a trial to accommodate your subject, and then another according to your own ideas; the result will generally prove to them your superior judgment.

BEWARE.

SOME one of our thoughtful subscribers in Wisconsin has sent us a circular headed, "Every Man his own Photographer," wherein the "National Photograph Co." offer a "New Photographic Instrument" for \$2, with which, they say, "Any boy or girl ten years old can take as good a picture as the most expert photographer."

Then follow various offers to induce parties to act as their agents, clothed in language and in a style very closely resembling that of the scamps in New York who offer to sell a large amount of counterfeit money for a small quantity of genuine greenbacks. Doubtless this thing is just as great a swindle. We know nothing about it, but we are investigating the case, and will report fully to our readers in our next.

Meanwhile, as we have said before, Beware!

CORRESPONDENCE.

MR. MORGENEIER'S ANSWER TO THE GERMAN PHOTOGRAPHERS' SOCIETY.

SHEBOYGAN, Wis., Sept., 1871.

DEAR SIR: The proceedings of the German Photographers' Society of New York, at their monthly meeting held August 4th, 1871, has made it my duty to claim space in your journal for an answer to the charges brought against me. To this communication I would respectfully call the attention of every honest photographer, and before I am adjudged in the minds of any, that they will carefully read all the evidence in the case. Did this statement strike at anything but my character and standing among men, I would pass it by "as an idle tale." "I would that it were so," for I love peace, and have thus far in life been blessed by its continual sunshine. I would still gladly pursue the "even tenor of my way," did not every sense of honorable manhood urge me to come forward in defence of my honor and rights. In this broad land of freedom and independence, blessed by a majority law, it is rutable to give the accused an "impartial trial by jury."

I leave to the judgment of all honest men whether this has been done in my case. The first intimation I had of my *supposed* conviction was in seeing the discussion of the New York committee scattered broadcast in the leading photographic journals.

Believing in the integrity and virtue of a majority of mankind, and that "God helps those that help themselves," I have no disposition to shun the responsibilities of life, or to quietly fold my hands and let my rights be wrested from my grasp. I have no fears in placing this letter before the public, because I believe that my motives and actions will be rightly understood by every photographer when they have heard my defence.

The attempt to injure me by the New York society is but a similitude of its precedent, "Can any good thing come out of Nazareth?" The simple answer, "Come and see," will not be inappropriate here, inasmuch as it rightly illustrates the precedent cases of doubt and unbelief since the world began. That Western photog-

raphers are awake to their interests, and that they are not entirely behind their New York brethren, will be seen by a comparison of Eastern and Western inventions in photography. The sooner the Gothamite Germans begin to exercise a comparative degree of brotherly respect toward the humble Western photographic Nazarene, the sooner harmony and peace will be restored, and the devotees of art will be enabled to walk upon one broad and unobstructed platform. *Peace*, the watchword, unselfish preference one for another, and fraternal feeling at large, will bring about the so much needed reformation.

A few of the charges brought against me amount to the consideration of an answer.

1st. The German manuscript of my book was written in March, 1870, antedating Mr. Hartman's articles some three months.

The English manuscript was prepared, and the book was printed and copyrighted several months before Mr. Hartman's articles were translated and published in the *World*.

Then, too, my translator wrote from oral points, one at a time (as he is not acquainted with the German language); and it is not safe to say that my book is "almost a literal translation of Mr. Hartman's articles."

Take these matters under advisement and it is easy to see that the charges brought against me by the New York society are base fabrications.

2d. The garbled extracts so kindly furnished by my fellow-countrymen of New York, for comparisons are not correct, and are well calculated to mislead and deceive, especially those not acquainted with the two languages.

To show the truth of this, I will send a copy of my *book, free*, to any address on receipt of a three cent stamp to pay postage.

I respectfully invite all photographers to correspond with me at once, and by a comparison of my book and Mr. Hartman's articles, be convinced of the originality of my claim as an author. At most the extracts furnished for comparison by the New York society proves that two authors writing upon the same subject for the same purpose would be liable to use similar language.

An experience of twenty-two years in the picture business has not taught me an entirely

isolated process, for I find that the manipulations of photography are based upon general principles.

It is needless to answer the description of my book further than to say that it sells for the small sum of fifty cents, the assertion of the New York committee that it sells "for the moderate sum of \$1.50" to the contrary.

Please see advertisements in photographic journals—*Photographer*, *World*, and *Friend*.

Let me say in conclusion that I have the kindest of fraternal feelings toward every photographer, and I hope that the same charitable feeling may be extended toward me in deciding this most vexatious and regretted misrepresentation by my German brethren.

Fraternally, &c.,

J. W. MORGENEIER.

The Display of Photographs at the Industrial Exhibition

OF THE AMERICAN INSTITUTE, N. Y.

ALTHOUGH the magnificent Annual Exhibition of the American Institute, N. Y., was hardly under way when we visited it on the 19th inst., still the display of photographs was as nearly completed as it will likely be. So we made our notes on the same.

While the photographs there *average* as good as any one lot we ever saw at any exhibition, yet the number is not nearly so great as we had hoped and expected to see, either of exhibitors or of pictures. In a large city like New York, where there are so many good photographers, and where such ample opportunity is given for them to show what they can do, we were a little astonished to see so meagre a representation of Photography.

The department devoted to our art is much better placed than heretofore, and is in a building built expressly for the purpose, well lighted, and in every way excellent.

In the list of exhibitors, which we give below, are the names of some whose work we expect to see at all exhibitions, and some who are new on the list.

Mr. William Kurtz seems to have exceeded himself. His plain pictures, in lighting, pose, and chemical effects, are perfectly elegant and refreshing. We noticed a new

tint for borders for medallions which is very pretty and unobtrusive, and we think the best thing we have seen yet. We know not how it is produced, but think, probably, from some rough woollen fabric being used to make the supernumerary negative from. Perhaps Mr. Kurtz, or his next man, Mr. Anderson, will tell us.

Mr. Kurtz has also been trying his hand at composition pictures, which we are glad to see. Among the best, and they are all excellent, are what we suppose to be—they have no titles—The Bricklayer, The Little Musician, The Warrior, The Wounded Soldier, and The Trapper. The peculiar background of some is very effective; no doubt being done with the brush. Mr. Kurtz also displayed some fine colored porcelains; one of an old gentleman with a red fez, also in the Philadelphia Exhibition, being peculiarly fine.

Mr. P. F. Weil made a fine display of stereographs; some of animals from life, in all sorts of droll postures, being very well done.

Mr. S. A. Holmes exhibits some very good architectural views "on double plates," *i. e.*, made on two negatives in parts at one exposure. Nothing very remarkable about this, as we have often seen much larger single plates worked.

Mr. G. G. Rockwood's display of large crayons and porcelains, in his usual good style, was creditable, and some of his outdoor views were very fine indeed, in every way.

Mr. Edward Bierstadt, Superintendent of the Albertype Works, in N. Y., exhibits some very fine things indeed, showing great progress in that line of mechanical printing. The portraits especially are much improved over his former results.

Mr. H. Wood, Jr., exhibits some photographs of the Rogers groups, engravings, &c.

Mr. John O'Neil shows some very fine examples of work, among others an 8 x 10 group of three ladies, striking us as being specially good. His colored work, porcelains, and large heads were all far ahead of his former work which we have seen.

Messrs. J. Gurney & Son of course make a fine display of plain and colored work;

perhaps the largest specimens of the latter class are by them; one of Miss Kellogg being admirably colored. Their plain photography is up to their usual high standard.

C. D. Fredricks & Co.—Mr. Hugh O'Neil—make a fine show of cards, cabinets, and large pastel and crayon work, which shows the impress of "brains" always apparent in Mr. O'Neil's work.

Next comes the display of two young photographers, whose admirable work is close after that of their former employers.

Mr. W. R. Rowell shows some large crayons and cabinets that are simply exquisite and artistic in pose, lighting, manipulating of the negatives and printing. Such work *must* bring its reward.

Mr. G. Frank E. Pearsall, of Brooklyn, is a sharp rival of the other. He has not long been in business for himself, but he is making his mark. His colored crayons and porcelains are very good; but his plain work is such as we like to see. In one frame were twenty-one styles of cabinets, such as he makes, the main differences being in printing dodges and designs. Such young men in the art are a credit and an honor to it.

Mr. T. Gubelman, Jersey City, also had some fine specimens on hand, which show that he also is a live and progressive artist fully up in modern photography. Both plain and colored work were shown by Mr. Gubelman. A large crayon head of a gent was very fine.

The American Optical Co. and the "Success" factory each made a small display of camera boxes.

Should we at a future visit see more items of interest, we will note them. We hope for the day when the display of photographs will be *overwhelming* at all such exhibitions.

PAST AND PRESENT.

BY H. H. SNELLING.

IN the May number, 1854, of the *Photographic and Fine Art Journal*, we held the following language:

"Two years more will effect an entire revolution in the daguerreotype business throughout the United States. The paper processes are commanding that attention we

have always claimed for them, and the rapidity with which improvements are made in them will soon bring them to that same degree of perfection to which the daguerreotype has already attained. The superiority of paper photographs as illustrations, the rapidity with which they can be multiplied, their distinctness, and the great number of purposes to which they are applicable, must cause them, in a great measure, to supersede the daguerreotype; and not only daguerreotypes, but lithographs.

"As they unquestionably require greater artistic skill in their production than the daguerreotype, they will be confined entirely to our best operators, who will find them so much more profitable than the daguerreotype will be abandoned for some one of the paper processes. This will throw the daguerreotype into the hands of those who have less artistic skill, but good mechanical manipulation, and among these the competition will be so great that a universal reduction of price will result, and fifty cents and one dollar will be the standard prices for daguerreotypes. They will, therefore, become most sought for by the people, and a greater number thrown off from the galleries than now, while men of refined tastes, printers, and publishers, will patronize the paper pictures, thus furnishing an increase of business to all connected with the art of sun drawing, and causing the two branches to find their proper spheres.

"Those who will hang a daguerreotype and a paper photograph side by side against the wall of their parlor as an ornament, cannot but give preference to the latter. For this reason the daguerreotype will of necessity be confined to the smaller sizes, while the paper photograph will assume even greater dimensions than those now obtained, and in a few years almost take the place of the finest engravings. They may be said to be a medium between pencil and water-color drawings and the engraving, partaking in their nature a little of each, while the fact of their being more true to nature—when well executed—will make them of more value to all who appreciate the fine arts or the beauties of the universe."

When this was written the daguerreotype

was in its prime, and the paper photograph was a poor miserable deformed infant, receiving the attention of but a small portion of the thousands engaged in sun drawing, and these making indifferent progress. It is true many tolerably good specimens came to us from Europe, yet they did not approach the excellence to which we claimed photographs would attain. Let us draw a picture of the pictures of that day.

Take the landscape—not a negative could be shown that was not faulty in every particular. The defects of the lenses produced aberration in every part of the picture; not a line nor an object true to nature or art, and everything that had life was marred by want of distinctness in outline, while the foliage was more or less characterized by fuzziness, more resembling tufts of cotton-wool than leaves.

The print, of course, partook of all these defects and exhibited many more peculiar to itself; its general characteristics, being want of clearness, no uniformity of detail, no softness, no delicate contrasts of light and shade. It reminded one of the first attempts at lithography, or mezzotint engraving, and the crude drawings of the savage.

Portraiture was still worse—masses of muddy shadows and dusky middle tints, and chalky high lights—the eyes looking like two whortleberries in a bowl of milk.

We have only to point to the illustrations in the *Philadelphia Photographer* and *Photographic World* to mark the contrast between the past and present.

I have a large portfolio pretty well filled with photographs of the past, and in looking at them now we are surprised—as good as some of them are, by such artists as M. A. Root, Whipple & Black, Germon, and others—that we ever thought them excellent when we compare them with the work of the same men, of Bogardus, Faris, Hesler, and others, as well as the contributors to your journals. We have stood for hours in the gallery of Bogardus, of New York, looking upon his exquisite workmanship of the present day with surprise and admiration. Not only he, but all lovers of the true and beautiful in art may feel proud of the success he has attained. And we are happy to say he is not entirely alone; but as time

fails us at this writing, we shall, with your permission, Mr. Editor, speak of others hereafter, with criticisms on your illustrations.

THE VACATION.

NEWPORT, R. I., Sept. 12, 1871.

VACATION! what a glorious sound to the impatient schoolboy! What a welcomesound to the poor pent-up operator!

One month—one good long month to spare! Shall we go to Newport? It is only another *branch* of the business after all. Do not the hotels contain our ethereal fashionables? The atmosphere our fogs? The beaches our dipping baths? The *modistes* our developers? Aye, surely, then to Newport let us go. Hark! the steam-whistle of the far-famed steamer *Bristol* assures us of a safe arrival in Newport, or that we shall all be blown to atoms; it is excitement any way.

It was a glorious moonlight night. Hall's orchestra discourse sweet (!) *strains* from the trombonists. Gideon Hall's orchestra of Boston; but whether Gideon's band, of which we have read so much in ancient history, or not, I am unable to state positively. I made the acquaintance, on the passage up, of a stunning girl. I wish you could have seen that girl's head. It was one of those impossible heads you read of in little books with dogged *ears* and yellow covers, you know. Her hair was all frizzled up in front, and kinder fricasseed and scrambled-like behind. She was a rattler, so I tell you. I took her down to supper, where we found a little old man trying hard to carve a refractory goose tough as shoe leather. Either by his unskillful carving, or by a sudden lurch of the vessel, his arm slipped, and the old gray goose slid quietly out of his native dish into the lap of an old lady in a frill cap and large seal ring. "Whilst I sat rapt withal," expecting volumes of apologies, I was rather taken aback by the old gentleman's saying (rather more sternly than the occasion called for, as I thought), "I'll trouble you to hand over that ere goose, mum, ef you please."

They set a splendid table on board of these boats, real ma-hog-any, as I found out upon examination, but with very little to eat upon it, however. After supper we sat out on

deck, I with my pure Havana just from Maine, she with her fan. The night being warm, we both quietly puffed in our different ways. My "lovely woman" was sitting at my right, and the placid moon was setting at my left, which she said—the lovely woman said, you know, not the moon—was a "sign;" but, whether a good or bad sign, she failed to state, thus leaving me in the pleasing state of uncertainty as to whether I was eventually to come into an immense fortune, or be speedily hung. The waters of the Sound were so calm and smooth, and the moon so bright that her reflection in the water almost convinced me that there were two moons; but, upon a little sound reflection, I came to the conclusion it was but the reflection of the Sound.

How it did rain the first week we got to Newport! And as for fog—well, I'll not write on that at present, we have almost had enough of *that* subject lately. It was enough to make a sad-iron weep, and I felt as much out of my element as an eight-day clock in a spider web. It cleared a little last week, and I went about visiting (photographically) *incog.* and a light wagon.

I saw here, for the first time, a very curious and ingenious little machine, about the size and form of a common watch, *which never requires winding up*, and is worn in the vest-pocket. It denotes on a dial every step a person takes; consequently, if you measure your step, you can tell exactly how many miles you have walked. I wish I could explain it here, but it would take up too much space. I regret this, as it is so exceedingly clever in its construction.

What, with bathing every day, billiards, bowling, eating, dressing, riding, and dancing, the time is spent worthlessly enough. The yachts are all here, and I have been invited to dine and sail several times. I was an old yachtman once. Pic-nics and literary parties, too. By-the-by, your friend, Bret Harte, is here, and took dinner with us yesterday. It is amusing to see the *toadies* "go for" Bret. I'm sorry you are not with us; the fishing is grand. A visit to Block Island and Montauk Point is a treat to us city fellows.

I learn, by the New York papers, that our city is getting sadly in debt, say four or

five hundred millions or so, and that the people are so ungrateful as to suspect our city rulers. Very unfortunately just at the moment they were to have proved their entire blamelessness, and in-no-sense, too, all the books and accounts have been stolen!

Well, well, there's the gong, so I must be go(i)ng also. I say nothing of photography; I am relieved from it now.

Good-by, dear P. P.

Yours,

ELBERT ANDERSON.

German Photographers' Society, New York.

THE regular monthly meeting of this Society was held September 1st, at 28 Stanton Street. President, W. Kurtz, in the chair.

Minutes of last meeting were read and approved.

Dr. Schultz - Sellak and Mr. Richard Walzl, were elected members.

The committee for the best method of printing weak, undertimed negatives, laid numerous prints before the meeting. Mr. E. Krueger had tried glasses of different colors, of which the dark blue gave the best result; but it was inferior to ground-glass, which, moreover, has the advantage that the prints made under it, either in sun or shade, won't show any bubbles or scratches, which might be on the glass used for the negative. Mr. Kutscher obtained a very strong and brilliant print under an iodized and silvered plate. He prepared the same by simply coating a glass plate with very weak iodized collodion, sensitized it in the silver bath, washed well and let dry. Mr. Schoene covered the negative with a thin porcelain plate. The contrasts between the prints made without and with this plate were very remarkable; more so, indeed, than the contrasts of the first named dodges.

The committee received a vote of thanks for their labors and exhibition of their interesting specimens, and Mr. Schoene's method was declared the most successful one.

Mr. Youngman remarked, in connection with the committee report, that porcelain plates, especially of larger size, are very expensive and consequently not practical, on

account of being easily broken when used for printing purposes. He suggested, as a substitute, to mix some milk with gum arabic to a proper consistency, and to coat a glass plate with the mixture. By elevating one end a little, in letting it dry, it will get the superior advantage over porcelain plates of being thicker on one end than on the other, which will enable you to cover the weakest part of the negative more than the stronger one. A glass prepared in this manner can also be used as a focussing glass in the camera—a very desirable knowledge for a travelling photographer in case of an accident. Mr. Youngman stated further, that in short exposures he had lately tried with pretty good results to color the negative by using a yellow or red aniline color in the developer.

It was very much regretted that the gentleman had no specimens with him, and consequently the meeting could not pass any judgment about this novel plan.

The committee for testing Mr. Newton's acetate of lead process reported progress. Several prints treated after his formula, and exposed daily for some weeks to the sun, showed so far, no difference from prints kept inside the rooms; but to pronounce about the merits of the process, a longer time for observation is necessary. One thing is sure, the hypo is *entirely* removed, as the most delicate tests failed to show a single trace of it, even in the first water after the treatment with the acetate of lead. Another rule, already fully established, is not to use the lead solution too strong, as otherwise the tones will be materially affected. One grain to the ounce of water is *the maximum*.

Mr. Nagel has lately been very successful in the reproduction of oil paintings, by coating the back of the negatives with a certain solution that takes the lead-pencil as easy as paper. As some colors will show of course entirely too dark in the prints, a skilful hand can, with the help of the pencil on this surface, remedy the defects very nicely. The solution is prepared by boiling arrow-root to the consistency of a very thick colodion, filtering through a cloth, and adding a few drops of ammonia. It dries in a very even surface after coating, and will keep a long time before it sours.

By direction of Mr. Grasshoff, Berlin, Mr.

Edward L. Wilson sent the Society as a present a large carton containing the portraits of the most prominent members of the Berlin Society for the Promotion of Photography. Most of our members had seen the pictures already at the Exhibition in Philadelphia. The secretary was ordered to communicate to Mr. Grasshoff the thanks of the Society.

The chairman exhibited a variety of Rembrandts, cabinet size, intended for the annual fair of the American Institute. As might be expected, they were A No. 1, and elicited general admiration.

Adjourned. EDWARD BOETTCHER,
Secretary.

79 NEWARK AVENUE.
JERSEY CITY, N. J.

PENNSYLVANIA PHOTOGRAPHIC ASSOCIATION.

THE stated monthly meeting of the Pennsylvania Photographic Association was held at the store of Messrs. Wilson, Hood & Co., 822 Arch Street, on Monday evening, Sept. 11th, 1871, President Wm. H. Rhoads in the chair. Twenty-five members present. Records of last meeting read and approved.

Thos. J. Lindsey, Geo. A. Osborne, Wm. E. Service, Isaac J. Tyson, and Harry A. Webb were proposed and elected members.

The Committee on Room reported that they had not been able to procure a room that would not be too expensive, and suggested that a new committee be appointed to procure a room, to meet once a month. The report was received, and the committee was continued and instructed to procure a room to be paid only for the night of meeting.

The committee on revision of Constitution and By-Laws offered several alterations and amendments, among which was the following: That Art. 3d of the By-Laws be so amended that each proposition for membership shall lie over one month, subject to an investigating committee.

On motion of Mr. Moore, it was voted that the Association propose subjects for discussion at a future meeting; it being difficult to get members to prepare or read papers.

The following subjects were proposed: "The best mode of making quick pictures,"

"Photographing Buildings," "Toning," and "Skylights and Lighting."

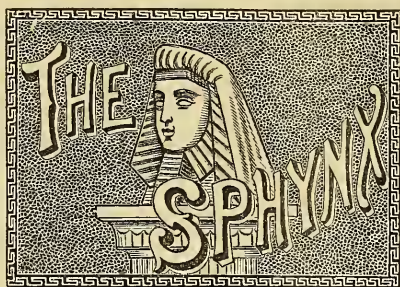
Mr. Carbutt exhibited some very fine "Woodbury prints," which were examined by the members, and found equal to the best silver prints. Mr. Carbutt stated that he had found great advantage in printing by coating the glass side of the negative, somewhat after the manner suggested by Luckhardt, with a collodion colored with dragon's blood and gum gamboge, and by cutting out over the parts it is desired to print deeper, such as shadows in light drapery, the windows in interiors, &c., great improvement can be made in the printing. He exhibited a print made from a weak negative, very much wanting in the high lights, and the detail almost obscured in the shadows; and another from the same negative with the colored coating, the latter print being sufficiently strong in the lights and full of fine detail. The difference between the two was very marked, and one would hardly suppose they had been made from the same negative.

President Rhoads made some remarks in reference to the members taking an interest in the meetings of the Association. He said this was the place to get acquainted and overcome the old prejudices. He thought there was no business or profession the members of which could receive so much benefit from each other by associating together as the photographer's. The simple idea that had been explained by Mr. Carbutt, for improving the printing qualities of negatives, was worth a great deal to us, and he hoped the members would try to be present at the meetings, and make them profitable and interesting.

Mr. Schreiber gave a description of a 20-grain bath he was using successfully with a 5-grain collodion. He had also used his ordinary collodion, and found it to work well.

The question of a lantern exhibition in connection with our meetings being suggested, some of the members promised to be prepared at the next meeting to offer some entertainment in that direction. Adjourned.

THE next number of the *World* will contain nine beautiful photographs of statuary, by J. H. Kent.



NOTE.—The pressure upon our columns lately has been so great that we have had to neglect this department. We now hope to give it regular attention, and we earnestly wish that *photographers themselves*, who are posted, would answer these questions. That is the intention of *Sphynx*. Even those which we answer as they are given, we should like to have others answer too. Aid us in making this a *useful* department of our magazine. Our last *Sphynx* was in our August number, and we give below the answers received to the queries.

Answers to August Queries.

To "Ignoramus." 1. How can a print be "*slimy*" when it is "*dry*?" Do you mean gray and flat looking? Send us some of your prints, and we will try and help you. —SPHYNX.

2. Albumen prints look "*woolly*" when finished, because the paper used has been too highly albumenized. Use paper less glossy, or dry the prints *slowly* between sheets of blotting-paper.—G. W. W.

Another.

Paper floated on old and thick albumen will crack, and *vice versa*. Fresh albumen is alkaline, and attacks the sizing of the paper, and hence the albumen sinks into the paper. Old albumen is acid. It does not attack the sizing in the paper, and is mostly retained on the surface, hence prints made on such paper are liable to crack. The "*woolly*" appearance strikes me as proceeding from alkaline albumen. Paper highly albumenized, should not be straightened out when dry, but moistened or mounted while wet.—A. S. BARBER.

3. You probably allow too long a time to intervene between the pouring on of the

collodion and the dipping of the plate, or again, you may have a bad sample of cotton in use.—H.

4. Generally one-half, or more, according to the time the bath has been used.

5. No. Not materially, or so as to affect their quality for photographic purposes.

Queries.

1. I have been unable to get any strength in my negatives. An old bath and a new one give like results. I have tried different samples of collodion without improvement. All give a miserably blue and porous film. I do not want intensity, as inclosed prints will show, but there is a coarseness about them that renders them unrepresentable. The only change that I have made is in the iodide of ammonium. I have changed from the dark crystal form to the fair or pale pulvis. This thing is annoying me to death. Do tell, if you can, what is the matter.

Perhaps I should state, that I work my bath forty grains strong, and neutral. The new bath referred to is forty-five grains strong and slightly acid.

Collodions used are ether and alcohol, equal parts; iodide of ammonium, five grains; bromide of cadmium, two to two and a half grains. Sometimes I use potassium instead of cadmium.

Thinking my collodion might be in fault owing to impure material, I sent to Charles W. Stevens, Chicago, who sent me several samples, but they do no better than my own. If it is not asking too much, I would like an early opinion on this subject.—S. T. B.

2. Why does my acetate toning bath turn red after toning? Does it do harm? How may I prevent it?—JULIUS.

3. I am "stuck;" can you help me?

i. I want to know how to get more contrast in my negatives?

ii. What causes a negative to develop quick and flat without any contrast?

iii. What causes silver solution to crawl on albumen paper, and how can I prevent it?

iv. What causes albumen paper to blister?—APPRENTICE.

4. Can any one tell if there is any more danger of being struck by lightning in a photograph glass-house than elsewhere?

5. What is the best method of testing ether for photograph purposes?—B. A. D. COLLODION.

6. I don't like to redevelop, and don't want to strengthen my negatives, and yet I can't get density enough without it. What's the matter?—U. B.

7. Will some one give me a simple method of making paper prints by development? Mine invariably get full of stains before reaching beyond the red color. Why?—OCTRON.

8. My greatest trouble is in getting negatives strong enough without redeveloping. How shall I get over it?—E. A. H.

9. Please tell me why bicarbonate of soda turns my toning bath purple? It does so when freshly mixed, before use. Also what effect nitrate of ammonia has in the developer?—"SABINE."

Answers to Above.

1. We think S. T. B.'s trouble is caused by defective lighting. His light seems to be reflected from all directions over his subjects, thus rendering the image flat and destitute of roundness or force. He should remember that it is not the *quantity* of light, but the *quality* that secures the best effects. The light should come from one direction, principally, using only enough reflected light on the shadow side to get proper details on that side. Moreover, some of the pictures sent are from underexposed negatives.—SPHYNX.

7. The use of litmus paper will show whether or not the ether is acid. Another test to show its purity will be to place a clean crystal of iodide of potassium in a small bottle, cover with ether, cork well, and allow to stand for an hour. If at the end of this time the ether remains unchanged, it can be safely used; if it changes to a dark red color, it is impure.

6 and 8. You cannot get intensity enough in all cases. Proper *lighting*, with *correct exposure*, and *good chemicals*, will generally give intensity enough.

But there are certain times when the light is poor and complexions bad, when redeveloping is not only useful but necessary.—SPHYNX.

Editor's Table.

The Photographic World, for September, contains a fine landscape, "Reflections" by Mr. T. T. Sweeney, Cleveland, Ohio, and the following articles: The Influence of Temperature and Moisture in the Positive Process; Rectifying Errors in Exposure or Intensity in Varnished or Unvarnished Negatives; Mode of Silvering Glass; On Reproducing Negatives; Notes In and Out of the Studio; South American Photography; Lectures on Modern Chemistry; The Sunbeam; Why Circles Please the Eye; Children in the Studio; Why we Say Grammes instead of Grains; Notes on Ferrotyping; Varnish for Retouched Negatives; Cleaning of the Plates; Instantaneous Drop; Photography for Boys; How Galleries are Set on Fire; Splashes of Silver; Defects; Hypo Club; How to Paint Photographs; Lea's Manual; Position and Composition; Our Picture; All the World Over; Table Talk, and Editor's Table. An unusually valuable number. Sent for 50 cents, post-paid, to any address.

PROF. MORSE'S FIRST CAMERA. — President Bogardus sends us a copy of a letter which he has received from Prof. S. F. B. Morse, viz.:

NEW YORK, Sept. 21, 1871.

DEAR SIR: I send you the remains of the first daguerreotype apparatus, made in this country in the autumn of 1839. Also the first achromatic lenses, which I sent to Paris to be procured for me.

Whether the apparatus can be used without supplying some parts that are missing, I doubt.

Accept these relics for your Society with my kind regards.

Respectfully yours,

SAML. F. B. MORSE.

To A. BOGARDUS, Esq.,

President Nat. Phot. Association.

President Bogardus thanked Prof. Morse for the National Photographic Association, and promises to have the interesting relics at the next Exhibition in St. Louis.

He also intends to try to induce Prof. Morse to have his photograph made with that of the relics, a copy of which President Bogardus has agreed already to give to the members of the National Photographic Association.

MR. J. H. HALLENBECK desires us to say to his friends that he is now engaged with B. French

& Co., Boston, Mass., where he will be glad to see and serve them. Mr. Hallenbeck is not only a stockdealer but a photographer, so that information on all topics pertaining to the art he is able to give. His communications in our pages are no doubt remembered, for they are practical and useful. As a man his friends know what he is. Success to him in his new berth.

"TO MY PATRONS" has almost reached 100,000. Its sale has been really wonderful. A displayed advertisement of it appears in this number, *and photographers who desire to use them to induce holiday trade should order now, for our orders are ahead of us so far, that two weeks are required to fill them. It will take longer after awhile.*

MR. F. G. WELLER, Littleton, N. H., whom we visited a short time ago, is doing a very extensive business in the production of stereoscopic groups, comic and otherwise, from nature. Mr. Weller has produced some capital things, which we have before noticed, and is constantly producing new ones. His success is great. Please see his advertisement.

DR. VOGEL'S HANDBOOK OF PHOTOGRAPHY steadily increases in popularity, and is the book which every photographer should have. Mailed or for sale by us or any dealer for \$3.50. It is full of good lessons.

MR. J. H. FITZGIBBON, St. Louis, Mo., Local Secretary of the National Photographic Association, informs us that he has already secured the beautiful and commodious Masonic Hall for the Exhibition in May, 1872, and that the residents of St. Louis are going to do all they can to give success to the enterprise. They *wanted* the Exhibition to be in St. Louis. We have already concluded part of the railroad arrangements.

THE WHITE MOUNTAINS.—We have had the pleasure of another good scramble among the White Mountains with Mr. B. W. Kilburn, the celebrated stereoscopic photographer of Littleton, and his camera. We have learned a great deal, and seen and enjoyed much more, going over the same ground we did two years ago, adding a trip on foot down into Tuckerman's Ravine, a fearful and wonderful and beautiful place. A long account of our trip would probably be inflicted upon our readers but for the fact

that we have not the room for it, and they are spared. We saw Mr. S. F. Adams, photographer at New Bedford, Mass., on the summit of Mount Washington, where he spends his summers at work. He gave us some magnificent cloud views, which he improves his time in catching when opportunity allows. We envy him his post almost.

Travel to the summit of Mount Washington is greatly increased, and next year we predict it will be greater still, owing to the tact, energy, and courtesy of the manager of the road, Capt. John W. Dodge. He does everything he can to make it pleasant for every one who makes the ascent, and his actions will make those who know him return next summer with their friends.

In the Franconia Mountains in the Flume we found Mr. Fifield at work as before, and doing well. Mr. Kilburn is making better work than ever, and it is a pleasure to be with such a man to see him work, and, better still, to know that he succeeds splendidly. We are returned with new strength for our coming work, and find plenty of it to do on our return.

"WHY WE SAY GRAMMES INSTEAD OF GRAINS."—In the last *World* we have, with the assistance of Mr. Edward Moelling, translator of Dr. Vogel's book, published an article with the above caption, to explain the difference between the French decimal weights and measures and our own system, and also stating the advantages of the former. Our readers should adopt this system, and we recommend them to get and read the article alluded to.

SIR WALTER SCOTT: THE STORY OF HIS LIFE. By Dr. R. Shelton Mackenzie. James R. Osgood & Co., publishers, Boston. For sale by Claxton, Remsen & Haffelfinger, Philadelphia.

In our notes on the picture of Kenilworth Castle, in our last issue, we referred to this work. A lover and personal friend of Scott, partly a Scotsman himself, and none better informed than he on the subject, Dr. Mackenzie is eminently fitted to give to the friends of that immortal author the "Story of his Life." As he aptly remarks, this is "literally a *guide-book* through Scott's Life and Works." It is written in such interesting style that one loathes to put it down having once begun it, until every page has been read. It is elegantly gotten up in cloth and gilt, and is abundantly illustrated with fine steel plate portraits of Sir Walter Scott, his family, &c. It is a charming work throughout. It was published on the 100th birthday of Scott, in commemoration of that event.

ANOTHER MEDAL AWARDED MR. KURTZ.—Just before the late war in France broke out, an International Photographic Exhibition was opened in Paris under the care of the French Photographic Society. It was suddenly closed, however, by the demands of war, and the works of art stored away. The French Photographic Society at their late meeting announced the awards of medals given, and among the fortunate and deserving ones is Mr. Wm. Kurtz, of New York. We congratulate him on this triumph of American work.

BURNED OUT.—On July 29th, Messrs. C. R. Rees & Co., Richmond, Va., lost their gallery by fire, and recovered very little of their property.

Messrs. P. B. Jones & Son, Davenport, Iowa, also met with the same ill-fortune in August. We sympathize with these gentlemen, and hope they may soon be going again. This is the second time in a few years Mr. Jones has been burned out, losing gallery, house and home each time. He would like to correspond with parties with a view to forming a partnership in his old location.

Mrs. G. L. Faulhaber, Sedalia, Mo., was also burned out August 25th. How frequently such fires occur, and yet how seldom are photographers insured. Our Photographers' Insurance Company should go through soon.

THE PHOTOGRAPHIC WORLD.—Photographers who do not take the *Photographic World*, will do well to look into its merits. The series of articles on "*Position and Composition*," "*Lectures on Chemistry*," and "*Photography for Boys*" (the latter being full instructions on the production of good photographs), alone give three complete, invaluable volumes on the several subjects well worthy of study. In addition, special attention is given to all that goes on in photography *abroad*. The live photographer cannot be too well posted on what his co-workers are doing in all parts of the world. The pictures also are fine; and this volume will embrace portraiture, landscape work, reproductions from original drawings, and several photographs from marble statuary. The *World* is a success, and will be continued hereafter, so we counsel all who would secure the *whole World* to secure it *now*, before all the copies are gone. Subscription \$5 a year. Parties who take the *Philadelphia Photographer* may have the *World* for \$4. *Secure the back numbers now.*

How to Paint Photographs, 3d ed., contains full instructions for coloring in *Oil*. *All new.*

Subjekt in Berlin zur Erinnerung an Photographie



Originals
by
F. GRASHOFF,
Berlin.

Boston Public Library
Berlin Society for the Advancement of Photography

Reproductions
by
WM. H. RHODES,
Philad'a.

THE

Philadelphia Photographer.

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No. 95.

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By BENERMAN & WILSON,
In the office of the Librarian of Congress, at Washington, D. C.

Photographic Properties of the Copper Salts. Photography of the Future.

BY DR. S. SELLACK.

THE number of substances which are chemically decomposed by light is extremely great; when the product of decomposition, as ordinarily, has another color than the original substance, a picture by effect of light, so to say a photographic picture, can be produced with any of these substances, by exposing a surface covered with it under a pattern, or photographic negative, or in the camera. The pictures on silvered paper, the common photographs, are sufficiently colored, but pictures produced in this way on paper impregnated with the salts of oxide of iron, uranium, chromic acid, &c., are very weakly colored. However, the products of decomposition, the suboxides of iron, uranium, &c., may, by simple chemical reactions, be transformed into other compounds of intense color. In that manner pictures in Berlin blue, in aniline colors, and others are produced. In *all* these processes a long time and intense light are necessary to obtain a sufficiently colored picture.

It is Daguerre's and Fox Talbot's great discovery, that iodide, bromide, and chloride of silver have the *faculty of photographic development*; this enables us to take a picture by a short exposure, and has engendered the art of photography. The sensitive Daguer-

rian or collodion-plate gets, by exposure, the so-called invisible picture, that is, a very weak picture of slightly decomposed iodide or bromide of silver. By development, the invisible picture is coated with a proportionate deposit of silver; the silver deposit which constitutes the developed picture is not the product of a chemical reaction with the invisible picture, but originates by a *peculiar physical property* of the latter; namely, *photographic attraction*.

The photographic development is not known with any other substance than the iodide, bromide, and chloride of silver. The development of the picture in Poitevin's process with tartrate of iron, which consists in sticking any powdery substance to the exposed parts, cannot be paralleled with it.

I have recently found that the *haloid-salts of copper, iodide and bromide of copper, have the faculty of photographic development* like the salts of silver. A plate of pure copper, iodized or bromized as in Daguerre's process and exposed in the camera, develops a picture in mercurial vapors. Also, when the bromized or iodized copper-plate is sufficiently exposed under a photographic negative, a picture is produced which can be fixed by hyposulphite. The sensitive copper-plate, therefore, acts exactly like the Daguerrian plate. A process similar to the wet collodion process is impracticable with

the salts of copper on account of their solubility in water. However, it is proved now that the wonderful process of photographic development is not peculiar to the salts of silver only.

It would be of the highest interest to substitute other compounds for the silver-salts in the negative process; not because of the preciousness of the metal, but on account of the imperfect sensibility of its salts for the different colors, pure red and yellow having absolutely no effect upon them. I have formerly stated that the defective sensibility of the haloid salts of silver is accounted for by their very slight color, the chloride being rather colorless, the iodide and bromide being slightly yellowish; further, that any substance which is at all sensitive to light, is the more sensitive for the different colors, the more darkly it is colored itself. A sensitive substance absorbing all visible colors will be equally as sensitive as the eye. The sensitive salts of copper are much more darkly colored than the salts of silver, but an easy process is not yet found to work them. We may hope however, with some confidence, that the photography of the future will use darkly colored sensitive compounds, which, by far, surpass the salts of silver in sensibility for the different colors.

COLORING PHOTOGRAPHS.

PEOPLE do have a decided weakness for color. It crops out often in a form annoying to the photographer, when he is asked if it would not be an improvement "just to flush the cheeks a little," or to paint that bow, or gild the chain; or he is told of "So So & Co.," whom, of course, he knows to be inferior artists, that a certain lady, friend to his present customer, took a piece of her dress, and her jewels to them, and they colored the picture by them; "it was beautiful, just like wax." In his secret heart our photographer believes good plain work to be just perfect. He has a little conscience; he has some eye for color; he has seen So So & Co.'s daubs; he knows that one and the same hand does their India-ink, water colors, ivorytypes, porcelains, and their oil (if they go into that line), and that these things are let out on the public at prices that a good

painter could not touch them at. So the question of competition becomes irritating, in proportion as the eye of the public is dull, and its purse-strings tight. But in spite of the dull eye and tight purse, the public clings to its weaknesses, and our photographer, if he will have a first-class reputation, must be prepared to do the wax-like.

The usual plan is, engage an "artist" on a weekly salary, who touches up, and paints out, in a weakly way, what little good there may have originally been in the photograph, and as long as the public prefer a little mucky daubing to the pure expressing of simple form, so long will these pseudo artists flourish, parasite-like, upon our more legitimate art. Against good painting we have nothing. If a capable man, or woman, chooses to take a photograph, as a ground to work on, and will produce thereon a piece of genuine coloring, the method is justified by the end, and the thing is occasionally done. Neither let it be imagined by any one that the writer holds the present class of colorists as solely responsible.

Incapable, conceited, and dogmatic, as for the most part they are, I have rarely met one who did not sincerely desire to improve, although it is a notable fact that as soon as one does advance in skill to a high point, he generally emancipates himself altogether from the slavish limits imposed on his hand by the photograph, and takes to drawing from life.

The photographer is usually the most to blame. Seeking to make too large a harvest out of the public credulity, he thinks he can't afford more than half to his artist, and oftentimes not as much as that; and also, as before intimated, puts his work at prices, the whole of which would not pay for good labor. Again, generally, too wide a range is expected of the colorist. He must undertake all that can be done with a brush, and be up to the dodges, ivorytyping, &c. None but a veteran could master so much. Even among life-long artists one line is considered quite enough, but our photographic colorist, without having learned to draw even, must wield brushes and crayons in all the styles. It is no wonder if under these circumstances, of poor pay and diluted skill, our colorists manufacture the terrible, hideous, absurd

monstrosities, called by the gracious cognomen, "colored photographs," with which our galleries inundate the homes of this land, and which in cheap frames can be found, a deadly rival to the plain photograph, in almost every parlor.

Not to be too modest in the way of putting it, whether or no these things are seen to be a nuisance, and a foe to art, depends on the standpoint from which they are viewed. Ignorance, a low grade of taste, may admire them, and be moved to some brutish sense of beauty, as an ox might eye the green grass and yellow buttercups. Commerce may quiet the rising protest with a handful of dirty greenbacks, but taste and conscience will alike protest against these impositions on a credulous and weak public.

With many it is yet considered an open question whether photographs ought to be colored at all. Is photography a fine art? If so, why are not its productions entitled to consideration in their pure form as those of the other arts are conceded to be? Who would flush the cheeks of a marble statue, or give a costly engraving to be colored, or put gold-leaf on the jewelry of an oil painting? But be this as it may, if photographs are to be colored let them be well done. Employ skill at a fair price, and as for these present incapables, let them learn first to acquire a firm true hand, that can draw with stipple, and hatch, regularly and delicately, not forgetting the clean wash. If with practice they can't acquire this, let them drop out of the ranks, and find something suited to their level that they can learn to do well. Hoe corn, milk the cows, make shirts, cook food that can be digested, any thorough labor is more honorable than this pretentious daubing. And those that with careful practice find themselves improving as colorists, let them still be assured, that only the study and toil of a lifetime will in any degree satisfy the requirements of artistic perfection.

The above was written some time ago, laid aside and forgotten, till lately coming upon the book* of our old friend Ayres, we were reminded that we also had an effusion on coloring photographs.

Mr. Ayres we have enjoyed the acquaintance of for years, but singularly never saw his book till within a few weeks, which certainly was our own fault, as we never supposed that we were personally interested in the technicalities of coloring. The book we have found interesting and useful. If the *reading* of it will not transform the photographer into a skilful painter, it will at any rate elevate his critical faculty, and promote his power of judging of what is good in pictures, and help him to understand *why* certain things are wrong and others right, in the make-up of paintings or photographs. This is a power in which we judge that photographers generally, as well as other people, are very deficient. They feel, on looking at certain works, a sense of pleasure, and are satisfied to rest there without seeking to know why they are pleased, and whether the feeling springs from a right source. Entirely forgetting that *feeling* is too vague and unreliable to be trusted as a means of education, and that in *knowledge* is the only safety. To know a thing, to know that we know it, to surround it, to penetrate it on all sides, to find its causes, its nature, its tendency (at least as far as the relativity of all our knowledge will permit), this is ever the aim of the serious aspiring mind. Only in the modest confidence, which a modicum of success in such efforts will give, is one entitled to hold any opinions, or pass any judgment whatever on art productions. Criticism as we generally hear it, what is it? Two hard words exactly define it, "Finical Hypercriticism" (don't choke, but consult your unabridged), fastening on small points, imaginary defects, never appreciating the whole as a whole. Avoid this tendency, and cultivate that clearness of perception and accuracy of knowledge, which alone can give lasting satisfaction and make you master of your profession.

W. J. BAKER.

BUFFALO, N. Y.

—♦—

You will observe the call for aid to relieve the wants of our suffering fraternity in Chicago. In places where there are several photographers, let some one personally see his co-workers and induce them to give what they can spare.

* "How to Paint Photographs."

PHOTOGRAPHIC DIALOGUES.

BY ELBERT ANDERSON,

Operator Kurtz's Gallery, 872 Broadway, N. Y.

M. WELL, so here you are back again in your native dark-room; all ready for work, I see.

A. Yea, verily; what can I do for you?

M. I want to consult you as to the best method of taking babies.

A. You have just come to the right shop for that. I can give you a hint or two in *that* line. In the first place, I prefer a collodion made with bromide of *potassium*, for children, and bright lights generally, which is the kind of light in which I generally put babies; and, for a more subdued light, and especially on rainy days, I prefer a collodion made with bromide of *cadmium*.

M. This seems somewhat contradictory to me.

A. How so?

M. You prefer a potassium collodion for children and babies, consequently you prefer a collodion which I presume works quick; yet, in dull weather and in weak lights you use a cadmium collodion; how's that?

A. You misunderstand me. I do not use a potassium collodion because I think it works quicker, but because I think its chemical effects are *better* in a bright light, just where the children are generally put; and I use a cadmium collodion in a more subdued and weaker light because I think *its* effects are *better* in such light. In taking babies (not children) we must "go for" the head, and let the draperies—

M. Rip!

A. Exactly.

M. How is the collodion made?

A. Use $4\frac{1}{2}$ grains of iodide of ammonium to 2 grains of bromide of potassium. Dissolve the ammonium in the alcohol and the potassium in the smallest portion of water that will take it up, and add it to the alcohol and shake; now add the ether gradually, little at a time, shaking between each addition. The mixture will turn milky from precipitated *potash*. Observe, the precipitate should remain suspended in the collodion and not fall to the bottom of the bottle. When all is added, and thoroughly shaken,

filter it through filtering-paper, and it *ought* to run through *perfectly clear*; if not, filter a second time. Now add 4 to $4\frac{1}{2}$ grains of cotton and shake until dissolved. This will clear in a day or two, ready for use. Make a few ounces at a time only, and use pretty *new* for babies. When the residues or older portions are bottled it is good for bright lights. In making *copies* of dark originals and taking pictures of badly-lighted interiors, especially when the time of exposure is prolonged, I recommend the use of a cadmium collodion.

M. "Tank oou, itty Anky Doody." By the by, how about the developer?

A. Water, 16 ounces; iron, 2 ounces; acetic acid, 2 ounces.

M. No alcohol?

A. No; only if necessary to flow the plate. When this is the case, it were better to boil the bath ten or twelve minutes or so. Alcohol in the developer performs a part not *generally* understood, and I shall take special care, at some future day, to thoroughly explain the exact action it has on the negative.

M. How do you manage to keep the little dev—darlings quiet?

A. This is what I use; it is simple in itself and absolutely effective. Toys, ringing bells, whistling, &c., are all very well in their way, and generally in mine, too. I use two 8-ounce graduators, one of which I fill with water, into which drop a brilliantly painted ball of wood. Now commence pouring the water from one gradiator into the other gradually, and tell the little one to look out and see the ball bob over, which you may prolong at pleasure. The intense desire to see the ball bob over generally produces the desired effect. *Try it.* Out West, in—

M. The Rocky Mountains, for instance.

A. They place the sitter, and when ready the operator draws out an enormous horse-pistol, which he points directly at the sitter's head, exclaiming, "Move a hair's breadth, if you dare, an' I'll blow yer cussed brains out!" Now, Marshall, I want to ask you something. Here are several imperial cards of gentlemen, and you will notice in every one a whitish line all around the black coat, where it comes in contact with the lighter part of the background; and further, you

will observe it in some of the proofs and not in others; further still, it is in some parts of the same proof and not in others. What is the cause of this?

M. Pshaw! Anderson, don't you know what *that* is?

A. Do you?

M. Certainly; it's his *breathing*. It is not on his dark hair, where that touches the light background, because the head doesn't breathe; moreover, it is supported by the head-rest.

A. You are sure, then, this is the reason?

M. Why, of course.

A. See, here are some flowers in this vase, against the light background; they have the same whitish line around them. They do not *breathe*, do they? The back of this chair has the same.

M. Well, I'm blamed if that isn't so.

A. Perhaps you will say, if the flowers do not breathe they *blow*. How's that?

M. "No more of that, Hal, an thou lovest me." I don't like to talk of *blowing*; I might be thought personal, you know. What's *your* notion of it?

A. The proof has this line because your negative has it; your negative has it because your ground-glass has it; in fact, your *lens* is the cause of it; all those dark parts, against the light ground, which have it, *are out of focus*, and it is only there that this occurs, whereas those parts in focus—the back of the hair, for instance—have it not. This is so obvious it will certainly need no further explanation.

M. That's so. Here's a question which appears to have puzzled the Hypo Club.

A. Give it—*breath*.

M. What causes the plate to become covered with metallic spangles of silver, at times in developing, and not at other times; the collodion bath, developer, time, &c., being the same in each case?

A. In developing a negative, and in pouring the developer on and off the plate until it becomes muddy, and now *nearly* emptying the developing glass. This will not cause the spangles on this plate, but fill up the developing glass with fresh developer (without washing out the glass) and develop a fresh plate, when its surface will become covered with these floating spangles.

Halloa! here's a squatter; excuse me, now. Call in again, when I'm not busy; I've something very curious to show you.

M. Well, I'm OPH.

Curious Photographic Experiences.

BY JOHN L. GIBON.

WE are practicing a comparatively young profession, but one that has made almost magic strides toward a perfection that in this case seems almost attainable.

Already, in different parts of the world, there are devoted to its interests, magazines and papers that greatly aid in the enlightenment of the uninitiated, and in the improvement of those who are considered far advanced in its mysteries. These publications teem with articles of real practical importance, and able pens, month after month, give to a yearning multitude, information that is eagerly studied, and it is to be hoped, carefully remembered.

The laborer, however, will tire; and as it has been enjoined upon us to take from the seven days of a week, one upon which to rest, so do we look even in our studies for some relaxation. Pictures adorn the heaviest philosophical works, they amuse the mind, as it were; and the gravest facts are oftentimes most indelibly impressed upon our understanding when we receive them through the medium of an anecdote or a homely simile. Let us sit down to ever so excellent a dinner, and should it be composed only of the substantials of life, we finish it with an unsatisfied feeling—we need the piquancy of a salad, or we desire the pleasure of tasting a dessert, however daintily we may mince of it. Without more ado, then, and hoping that no dissenting voice will object to the space thus occupied, I seriously propose that we shall recount a few of our daily workings, and by interchanging our "experiences" open up a fund of anecdote that can but prove to be interesting.

Lawyers, doctors, clergymen, and professionals of all grades fill the columns of newspapers with incidents occurring in their various practices, and yet we photographers who constantly meet with so many people,

venture but seldom to retail the thousand and one little episodes that come under our notice, and many of which could be worked up into items of literary importance. I especially feel my own want of power in initiating such a course, and can only hope that the exchanges that may emanate from other sources will prove more entertaining. I could appropriately commence my own narrative in the style of a highly celebrated and somewhat accomplished novelist, and tell, how upon a gloomy day in November, I was standing, solitary, at one of the front windows of my reception-room, gazing drearly out upon a street, that usually brilliant with equipages and promenaders, then looked as if deserted. The heavy leaden clouds seemed to have lent their hue to all objects, the wind dismally moaned among the myriads of business piles around, the cars hurried along with few occupants, and the occasional pedestrians had a woe-begone sort of look that betokened in each and all of them a desire to get home and under cover. All anticipation of business had long since left my mind, and I was most probably contemplating the continuance of such an unpromising spell of weather when a new feature was added to the scene. It was in strict accordance with the character of the day and its suggestions—a funeral.

It came slowly along the street, solemnly and stately enough. My interest in its movements was suddenly turned into surprise at an unexpected manœuvre. The hearse had been halted before my door, and the carriages taken their position along the curb in its rear. Immediately after, a well-dressed stranger entered my rooms, and questioned me as to my readiness of making an immediate picture. Assuring him of my disposition to accommodate, my attention was again directed to the window and my surprise soon changed into astonishment when I beheld the undertaker, assisted by his attendants, displace the coffin from its temporary resting-place and carefully bring it into my gallery. The lid was soon removed, and the "subject" placed at my disposal. The remains were those of a bright-looking youth of at least sixteen years of age. Death had spared a naturally handsome face, or if he had dallied with its features at

all, had added to it an expression of sweetness but seldom seen in life. The poor boy was carried tenderly to my glass-room, and confining myself to a head and shoulder effect only, I succeeded in making a picture, that devoid of the ghastly suggestions of the grim destroyer, cannot but even yet be a solace to those of the family who may still retain it. The work speedily finished, the incident was at an end. Decorum marked the whole procedure. The family was a French one.

I formerly was well acquainted with an eccentric person, who had amongst other characteristics oddities, conceived what he called a "Theory of Coincidences." He had, with infinite labor, compiled quite a volume of data, giving the reporter's accounts of numberless steamboat and railway accidents. Explosions, fires, murders, and suicidal histories followed each other in boundless profusion. He had classified these, and zealously attaching the particular times of the occurrences to each event, he proposed to prove that invariably one horror or singular circumstance would shortly be followed up by another, similar in its most important details.

Should this little essay ever meet his eye he will doubtless claim an additional link to his chain of so-called proofs. A month had not elapsed since the affair I have recounted, when almost the identical scene again transpired. A second mournful procession came to me in the same manner, and upon the same errand. Following the analogy, even more closely, the corpse was also that of a youth, and the features not unlike those of my previous visitant. The recurrence of such an episode after so short an interval of time, gave to the matter a publicity that I had not courted, and the result was that a vast amount of superstitious lore was expended by the wisecracks of the neighborhood for my especial benefit. As I have devised this chapter for entertainment only, it now seems odd to me that I have picked out reminiscences that have a sad bearing. One after another, incidents of past histories flash upon my memory, and I can scarcely desist without adding an anecdote or two where my services have been devoted to the never-waking sleepers.

I will here interpolate the statement that my jottings are not idle fancies, but that they are the accounts of actual facts.

Changing to another season of the year, I must tell how, upon a bright, cheerful spring morning, a good-looking Quadroon came into my place, carrying with her what appeared to be a large clothes-basket. She was tidily clad, and gave one the impression of her being a trusty, jaunty ladies' maid. In response to her inquiries, I assured her of my immediate ability to wait upon her, and quickly coating a plate, was soon prepared to accommodate her. Coming out of the dark-room I was somewhat annoyed to find that she did not appear to be ready for the sitting. I delivered myself to that effect. Without the slightest embarrassment, she told me that she had no idea of sitting for a portrait, but that she had brought "*this*" to be photographed. She then coolly opened the lids of the basket, and produced a marvellously pretty infant. It was a tiny little thing, reminding one of a piece of wax-work, excepting that its perfections of face and form were too great to confound with the less slightly efforts of the modeller. It had never known of the joys or sorrows of even infantile life—had probably never breathed—but one could not blame the fondness of the mother who had thus sought to perpetuate the image of what might have been to her an idol of affection. The manner of procedure was all that gave singularity to the transaction. It most certainly resulted in giving to me an idea that since then I have made further use of. The photographing of the deceased is invariably looked upon as a most disagreeable branch of our business. Many avoid it. I acquired some little reputation for doing that class of work well, and, in addition to attending to my own customers, I have frequently been called upon to execute commissions received by others in the business, who objected to the details of the work. It occurred to me that the skylight was a more favorable room for such purposes than could be procured in any private residence, and since the affair of the basket, I have had several infants surreptitiously carried to my gallery in the same manner and for the same object.

A few remarks as to the best plan of pro-

cedure for photographing the dead at the houses of their relatives might not be out of place here. I never recollect of having read of anything bearing upon the subject. As you are liable to be called upon at any time for such a purpose, it would be well to remember a few suggestions.

Always endeavor to make the picture before the body should be placed in its coffin. Confine your labors to the reproduction of the head only. Endeavor to place that, so that an artist can afterwards, by painting in the eyes, convey the appearance of a possible or natural position. Avoid a full face view. Do not bring the body *alongside* of a window. The evils of such a course are almost irremediable, even in the hands of the most skilful colorist. A face half in light and half in shadow is most difficult to manage. Your instrument should be nearer the light than the subject. Remember you have no motion to contend with, and that the length of your exposure is limited only by the conditions of your plate. Make it your effort to produce the most *life-like* picture of which you are capable, and bear it in mind, that with the aid of the painter, not only good results are sometimes obtained, but even those of a most highly satisfactory character.

I had designed detailing the particulars of what might be called adventures, in which the dead were the main objects of interest, but my limits will hardly permit it. In one case, the family, wealthy, and holding a good social position, so violently discussed the question as to how the picture of a deceased and favorite child should be taken, that not only a separation of friendly feelings was occasioned between the interested parties, but wellnigh a division of the poor child's corpse was nearly produced. It had died of a malignant disease, and its misguided though well-wishing relatives were rather too demonstrative in their efforts to procure the consummation of their peculiar desires. In another case, like a ghoul, I had to convert a receiving vault in a cemetery into a work-room, and surrounded by ghastly companions, picture and endeavor to make imperishable the spectacle of that which was so fast passing away.

Let us change the subject. I have no desire to be mistaken for a gloomy monoma-

niac, who, having started upon a morbid theme, cannot release himself from its fascination. The humorous phase of our profession is after all far more attractive, and we have numberless instances of its application. There is one old gentleman whom I frequently see. That man can never again be induced to sit for his picture. He is apparently an intelligent person, and is certainly one well to do in the world. He conceived and executed the notion of having his face delineated for the benefit of his heirs. I was the innocent miscreant who carried out his unfortunate design. I shall never forget the time when, after exposing the plate and releasing his head from the clasp of the much maligned rest, he turned indignantly upon me and declared that the chemicals I used in the camera-box had found their way through the lens and had forever ruined his eyesight. Expostulation and explanation were both unavailing. He still insists that he narrowly escaped being totally blinded, and he strongly advises a measure to be taken by the leading spirits of our commonwealth, preventing the further prosecution of a business so detrimental to the public welfare. The photographer is like unto the keeper of a hotel. His patrons are of many kinds and diverse natures. He acknowledges the salutations of those to whom he might with more propriety say, "Who are you?" than, "How are you?" He deals with human nature in its every aspect. I will finish now by relating a little circumstance that occurred a few weeks ago, and that I think will entitle me to having found the "champion customer of the period." A well-dressed and rather prepossessing lady came into our place, and, after casually examining specimens of work, desired to sit for a picture. I attended to her myself, and found no difficulty in producing an effective negative. She posed readily, and maintained a pleasing and desirable expression. The photograph was to be of the cabinet size. The price to be \$1.50. She left a deposit of 25 cents, and promised to call the next day to see the proof. She came, saw and admired it. She professed to be travelling, and desired that the finished picture should be forwarded to her destination in Vermont, enjoining us to send it C. O. D. We did as directed. The Express Company

was to collect the remaining \$1.25, in addition to the collection charges, which we rated at 50 cents. The instructions were forthwith carried out. The photograph reached its destination. The lady, apparently, had by this time changed her mind. Her approval had evidently merged into antipathy, for, with a talent that should be expended upon schemes of greater importance, she coolly repacked the cabinet, sent it to our address by return express, enjoining a C. O. D. \$1.75, in addition to freight charges of 60 cents additional,—in all, \$2.35. An attendant in our store, unaware of the transaction, received and paid for the package. Figuring over the little affair, I find that we are exactly minus \$1.10 for expressage on one cabinet picture, independent of any other entailed loss. The sell not being one of very great magnitude, I can very well afford to laugh over it, although I receive it as another intimation that there is but one proper way of conducting our business, *i. e.*, upon the "pay in advance" system. Upon this subject, more anon.

812 ARCH ST., PHILA., October 2d, 1871.

Practical Landscape Photography.

BY PROF. J. TOWLER, M.D.

DURING the month of September I had the good fortune and pleasure of meeting my friend T. C. Roche; shall I append the title, Esquire? or leave simply the unsophisticated name? Plain T. C. Roche looks best, because I know the man; his merit is within, and not extraneous; his work is his Doctor's Degree. My friend had just returned from the Yosemite on the Merced River, county of Mariposa, Cal., where he had been transferring to the stereoscope those lofty precipices and giddy cascades, of whose grandeur and magnificence the mind can form but a faint conception from typographical description. Watkins was the first, I believe, to photograph the scenery in the Yosemite Valley, and his large views are unsurpassed in excellence of workmanship, and taste of position. Muybridge came next and brought forth grand results. Friend Bierstadt, of Niagara Falls, followed suit. He too is a master-hand in the photographic art, and has taste; his stereoscopic views are in the

hands of all true lovers of the grand and the beautiful; and now that Roche has been on the ground, I would advise all magnates, potentates, imperial dignitaries, and corrupt statesmen to bespeak a complete set of their views. They will act like the balm of Gilead on their hypertrophied conceits, and teach them that the scenes of nature are far ahead of all their financial conceptions.

I spent two or three days with Mr. Roche in the Watkin's Glen, at the head of Seneca Lake; he came on purpose to take stereographs of this ravine, whose reputation is just beginning to get a firm foothold on the public sentiment. For years I have been trying to make all friends of scenic grandeur believe that this region of the lakes Seneca and Cayuga presents titbits of beauty and magnificence not surpassed by the Alpine ravines, not even by the valley of the Merced. Mr. Roche himself confesses to the superiority of these glens for the stereoscope over all that he has seen, either on the Pacific or the Atlantic coast. His judgment has weight.

I am permitted to describe the whole process of making a negative on the field, as practiced by my friend.

COLLODION.

The collodion which he uses, he prepares as follows:

Alcohol,	. . . .	8 oz.
Ether,	. . . .	8 oz.
Gun-cotton,	. . . .	96 grs.
Iodide of Ammonium,	. . . .	40 grs.
Iodide of Cadmium,	. . . .	40 grs.
Bromide of Cadmium,	. . . .	48 grs.

This collodion is for the gallery, that is, for portraiture; for the field, he adds 24 grains more of a bromide.

The glass used by Mr. Roche is of excellent quality, flat, and free from flaws; but he does not albuminize the plates, which is an evident proof of itself that he bestows much labor and care in cleaning them; for failure in a plate is something I did not observe.

SILVER SOLUTION.

The bath solution is filtered in the morning before he starts for the scene of action. He is very particular to keep this in good working condition, for he ascribes nearly all the defects in the negative to some un-

toward condition of the silver solution. The solution is filtered into a large bottle, and kept there until required for a day's work, it is then poured into the ordinary rubber bath furnished with an air-tight lid, held fast by screw-clamps. Before he employs a new rubber bath, he washes the inside thoroughly with a solution of potash or soda, which removes the grease still adhering to the walls of the vessel; he then washes it carefully with water to remove the alkali. When the vessel is quite dry, he pours into it a sufficient quantity of negative varnish, and by tilting the bath, he causes the varnish to cover every part of the inside, which is intended to receive the silver solution; the excess of varnish is poured back into the bottle from which it was taken. As soon as the varnish is completely dry, the bath is ready to receive the silver. By this treatment there will be no trouble in the shape of fortification curves, and specks, &c., of reduced silver, which invariably occur when a new rubber bath is used for the first time or two without such treatment.

DEVELOPER.

The developer in use is simply the ordinary iron developer, with the addition of a small proportion of sugar candy, and without alcohol. This developer produces a rich bloom on the film, a very slight roseate hue which gives a very pleasing negative, and all the intensity that may be required. Mr. Roche is averse, and properly so, to redevelopment, which in stereographs *never* fails to produce snowy patches when viewed in the stereoscope. The ignorant and uninitiated, it is true, are better pleased with strong contrasts, and are very apt to select the worst pictures; but the artist and those accustomed to the use of the stereoscope invariably select photographs full of detail well developed, and free from blanched patches of any kind.

Now, whilst I am just discussing this subject, it may be a pertinent question for any one to put: How are such artistic negatives to be taken?

There are two conditions absolutely necessary in all cases where foliage, rocks, buildings, and water are to be photographed together, which are: the light must be diffused,

that is, the sun must be behind a cloudy sky, and the exposure must be long. In this way the development is easy, and being under control, can be stopped at the proper time.

EXPOSURE.

Our readers, at least some of them, will be surprised to learn that the length of exposure, in order to produce in the Watkin's Glen an artistic negative, must seldom be less than five minutes for an aperture of a quarter of an inch, and in very many instances it has to be increased to ten, and even fifteen minutes. The same length of time will naturally be required in all similar deep ravines. Knowing this fact, I have abandoned all hopes of getting good results with dry plates in such dark nooks; and, furthermore, I am convinced that there is a limit at which attenuated light ceases to act on the sensitive film at all, and that this limit of attenuation is sooner reached for a dry plate than for a wet plate.

Mr. Roche, accustomed as he is to outdoor photography, can soon judge from the brightness of the picture on the ground-glass, how long the exposure must be—his first exposure was a little more than three minutes (rather long for a wet plate, you will say, especially on a bright morning in August and September), but this was not enough; his second plate, therefore, he exposed nearly five minutes. The picture was all right, and he did not vary the length until he changed his location after dinner, where the light was less powerful—here he gave eight minutes' exposure, which was scarcely sufficient, although the negative was tolerably good, and, I think, irreproachable; he afterwards increased the exposure to ten minutes, and finally, towards four o'clock, had to abandon the operation for the day—the light ceased to act from the dark rocks! There is one curious fact which I must relate here: when Mr. Roche was about to start on his expedition to the Yosemite Valley, and the saints in Utah, he focussed his lenses in New York and had never varied since, that is, he kept his camera at full cock all the way. He had two pair of lenses, one for all ordinary work—a pair of Dallmeyer's view lenses, which I do not think can be surpassed in efficiency; he had also a pair

of Busch's lenses, little bits of things, apparently more suitable for a microscope than for photographic purposes; these he used when driven into very close quarters. Their focal length is about one inch and a half, or, perhaps, two inches; but they will take a sharp picture much larger than is required for the stereograph. Such a pair of lenses is invaluable, indispensable in several positions in the glens in this region of New York State.

FIXING THE NEGATIVE.

The quantity of negatives taken in a day by our artist is quite large, on an average between thirty and forty. This, you will say, is impossible. I will tell you how he expedites matters. Of course he has his serving-man to carry his dark-chamber, fetch water, empty the dishes, &c. A large shawl of rubber is thrown over his head and shoulders by the man during development, and as soon as this is complete, the negative is washed in a dish of water, then taken out and coated with a mixture of water, four parts, and glycerine, one part. This being done, the rubber is removed at a given sign, and the negative is stored away until evening, when it is fixed in a weak solution of cyanide of potassium in the usual way, and washed. Plates thus coated with dilute glycerine keep moist for a long time, a circumstance that has been long known but little practiced, and in this way much valuable time is saved. When the light ceases to act the plates are fixed, and in every instance during the time that I was in company with Mr. Roche, there was not a single failure of development or fixing, when once the right time of exposure was obtained.

LUNAR PHOTOGRAPHY.

IN order to produce at night a photographic picture by the light of the moon exclusively, it is reasonable to try to concentrate upon the sensitive film the maximum of the luminous rays of the heavenly body, and also to receive the maximum of her reflected rays. In order to realize these two conditions, I will describe how I have proceeded.

The luminous rays of the light of the moon,

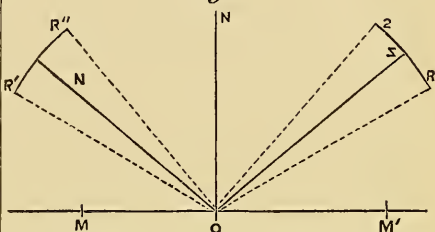
like those of all centres of light, are diverging. If the question were simply to obtain a picture of the moon, it would only be necessary to place the objective in such a manner that the image would fall through the axis of the lenses on the centre of the sensitive plate, the plate, forming a right angle with the luminous rays, would receive the maximum quantity of the same. But when it is desired to obtain a terrestrial landscape, with its plains and picturesque forms, which perhaps amount to one-third or two-thirds of the whole image, then it becomes necessary to proceed in a different manner, and to introduce a reflecting mirror, which, by augmenting the light, compensates for the loss which is experienced by lowering the axis of the lenses, and which reproduces the objects less bright.

All reflecting surfaces absorb a part of the initial light, another part is diffused, still another is lost in the depth of the reflecting medium, while finally a part is reflected, according to a law which is dependent on the nature of the reflecting substance, and which is greater as the surface of the medium is more or less polished, or the angle of incidence is more or less acute; theoretically, a well-polished piece of white glass, the lower side of which is silvered, would be the reflecting surface, which could sustain the maximum of reflection. It is impossible to offer to the experimenter such a surface, but the waters of the lakes or the sea offer a field of operations which is sufficiently practicable; although besides these liquids in their depths absorb a larger quantity of light than a solid polished surface, still this loss is compensated by the large extent of the lake or the sea, as the visible horizon is not limited. I have, therefore, taken the sea for a reflector, but I think, nevertheless, that the lakes in the north of Scotland, particularly where the mountains surrounding them are covered with snow, would be preferable to the sea; the effect of the moon being greater as we advance towards the Poles, and we have, therefore, by experimenting further north, a more intense image.

We have a lunar ray of light $R' O$, the reflected ray being $O R$; the angles $RO M'$, $RO M$, are formed with the line $M M'$, representing the surface of the sea, and the

angles $RO N$, $R' O N$, are formed with the normal N , being always in the same plane; it would hence be necessary to place the sensitive plate in the plane of the angle of incidence if the exposure could be instantaneous; this, however, is the reverse of what takes place, the exposure is long, the earth turns on its axis, the moon rises and traces a curve

Fig. 1.



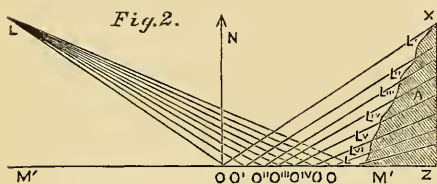
on the sensitive film, which is larger in proportion as the time of exposure is increased, therefore in order that the objective should always remain in the plane of incidence, it would be necessary to construct an apparatus which would have a motion equal to these combined movements, and which would permit us to obtain a round image of the full moon. In this case the terrestrial landscape would be destroyed, for the apparatus could not be constructed in such a manner as to follow the movements of the moon, while at the same time it would remain fixed for terrestrial objects. Fortunately, photography does not require, like astronomy, absolute precision; it is sufficient in the practice to take the central part of the curve traced by the luminary, and to place the objective in the plane $Z' O N$, $N O Z$. To fit this plane it is previously necessary to find out the time of exposure for the ascertained length $R' R'$.

This is not an additional difficulty, as it exists as well in photographing in the open air, and in the atelier, and the photographer can do nothing until he ascertains approximately the duration of the exposure; experience teaches it.

Meanwhile, when the objective has been placed in what I call the medium plane, the question will be to select the most advantageous point of elevation, in order to receive the maximum quantity of light.

The moon sends her rays in all directions; this is the divergency of luminous bodies, the light not proceeding in a straight line,

as in a homogeneous medium; the direct rays of the moon are reflected into space, and the reflected rays equally so, but at an inverse law, for the observer as well as for the exterior surface of the objective; the luminous rays may be considered as proceeding in a straight line, and the angle of incidence being equal to the angle of refraction, it follows that during the progressive ascension of the moon above the horizon, it becomes necessary to elevate the objective proportionably. It is, therefore, necessary to find an elevation near the shore, which may rise more nearly perpendicular in proportion, as the line $L'O$, $L''O''$, $L'''O'''$, &c., &c., is extended, and the more the luminous rays lose of their intensity, in accordance with the law, which says, that reflected rays lose their luminosity in proportion to the square of the distances.



It is, therefore, necessary to place the objective at an elevation, not at l, l', l'' , but at L', L'', L''' ; this is to say as near to the sea as possible.

M, M' be the reflecting surface of the sea.

O be the extreme point of the visible horizon.

LO would be the ray of incidence.

$M'O'Z$ represents an elevation near the sea.

The ray LO is reflected in $O L'$. If $O L'$ should be the most powerfully reflected ray, then it would be necessary to place the objective at L' , but as the rays $L O', L O'', L O'''$ are more and more active, in proportion as the angle formed by the incidence is more and more acute, it follows that it will be necessary to gather the light more directly, and this is done by depressing the objective. In order to determine the exact point, we will have to take a medium point on the line $O M'$, for instance, between O''' and O'' , and the objective being placed at A . In the same measure as the moon rises above the horizon, the point A has to be elevated.

Practically, it will be best to conform to the requirements of the instrument, for the instrument commands the operator from the moment when the inductions of science cease. In fact, the angle, the field of the objective, the focus, the inclination, the necessity of working with full aperture, the size of the image, which is calculated by the power of the lenses, all these matters are obstacles to the beauty of the picture, and have either to be avoided or overcome. But what photographic instrument shall we use? The one the lenses of which has at the same time the shortest focus and the largest diameter, for this will give the greatest amount of light and act the quickest. So far as I am concerned, I have used the Ross lenses, card No. 2, 4 P., $\frac{3}{4}$ T., 2 P., $\frac{1}{10}$ D., and I continue my experiments with the apparatus No. 4, 15 P. F., $4\frac{1}{2}$ P. D. The perfection of these instruments has reached the last limit, for they can be used without a diaphragm with very little loss.

When the moon has reached a certain altitude, forty-five degrees, for instance, it becomes necessary to disregard the usage of the same, and to increase the field of the landscape in extent and in the exactness of focal adjustment, leaving for the sky, which comes nearly blank, about a quarter of the plate. It will be necessary to focus on the point, midway between $\frac{O}{2} \frac{M'}{2}$. In dark weather, when the sky is full of immovable clouds, the borders of which are fringed with white, it will, on the contrary, be necessary to devote only a quarter of the plate to terrestrial objects, and to focus on the extreme line of the visual horizon.

In calm nights, when the atmosphere is transparent, with a pure sky, we can, by interposing trees with a light foliage between the sea and the sky, obtain beautiful definitions. We can profit by everything, castles, turrets, masts of vessels, projecting rocks, anything which will form a pleasing silhouette.

The section of a curve, which in the form of a tube is traced by the moon on the sensitive film, impairs the picture. It is better to represent in the sky the round figure of the moon, and nothing is easier. It is sufficient to take one or more pictures of the

moon with an exposure of one minute; we will then obtain a white picture which is slightly elliptical, of the correct size of the luminary, and which is printed on the paper after the landscape has been printed, the sky at the first printing being masked.

The first plan, if dark rocks are present, has very little light; when it is desired to obtain a very positive picture, it may be necessary to resort to successive intensifying, and an exposure of forty minutes, with the wet process. A pad of blotting-paper of four thicknesses, which has been soaked in water to which a few drops of ether and glacial acetic acid have been added, should be placed on the back of the plate, in the plate-holder.

With the dry process, when we disregard the image of the moon, we can expose for two hours, and by placing the objective in the medium plane of the arc of an ellipse, which the moon traverses in two hours, we will obtain a field which receives three times as much light as the one with the wet process. I do not consider this method convenient, as it gives dull and flat pictures, in consequence of the lesser sensitiveness of the film.

During the exposure it is necessary to wipe the exterior lenses with a piece of silk every four or five minutes, otherwise the dew which collects on the glasses will obstruct the passage of the luminous rays, and the refraction will interfere with the formation of a correct image. This operation is more or less absolutely necessary, according to the moisture of the atmosphere, but it is always requisite to pay attention to it.

It will always be difficult to avoid the metallic deposit of nitrate of silver. When the time of exposure exceeds thirty minutes, it will always be necessary to dry the plate slowly in a dry place, and to place it afterwards before a bright fire; afterwards the metallic deposit is rubbed off lightly with the point of the finger, or a piece of soft cotton. We can also wash the resisting parts with a badger's-hair brush, which has been moistened in water, slightly acidulated with acetic acid and alcohol.

In order to lessen the chances of metallic deposits, it is advisable to use a bath, the temperature of which is below that of the atmospheric air. This is produced by plung-

ing the bath vertically into spring water, or else to sensitize the plates in a cellar or another very cool place.

During clear nights I have observed very distinctly three different kinds of color in the lunar light. The yellow light, particularly when it approaches to white, is the brightest, although it exercises the least actinic action on the nitrate of silver; the bluish-white color, a little less bright than the preceding; next the bluish-green, which gives to the vault of heaven a green-black appearance, and to the sea greenish scintillations similar to what we notice in the waters of the northern Polar seas, which, although less bright than the preceding, exercises the most powerful actinic influence upon the nitrate of silver. These observations seem to prove, that in the absence of the white solar rays, the lunar chemical rays impress the sensitive film more strongly than the light rays, which is the inverse of what takes place by daylight. I believe, therefore, that I may say that the chemical rays of the lunar spectrum exercise, by their radiation, a stronger influence on the sensitive film of nitrate of silver than the pale, luminous rays, or that at least they only add their influence; but these are important considerations, which require extensive investigations and a thorough knowledge of cosmographic chemistry and optics.

I use a mixture of three different kinds of collodion; those of Mawson, Blanchard, and Thomas. They are iodized a month in advance, and a superaddition of two grains of a bromide is made, in order to make it more susceptible to the green rays. What is lost by a longer exposure is amply regained.

By the study of the lunar spectrum, we have acquired fresh knowledge about the extent of the light rays and the chemical ones of this body, and we have to search for the proper means to use them to the best advantage.

To develop the image I have proceeded as follows: 2 ounces of sulphate of iron, 1 ounce of ammoniac of iron, 2 ounces of weak alcohol, 1 ounce of glacial acetic acid, are dissolved and mixed with 36 ounces of distilled water. This developer may also be used as an intensifier by adding nitrate of silver to it, but I do *not* employ this system

of the atelier, but take 36 ounces distilled water, 1 ounce nitrate of silver, 1 ounce acetic acid, 2 ounces of alcohol, for all my open-air photography. I employ the intensifier alternately with the developer, without washing the plate. In particular cases, when we wish to obtain the high lights particularly intense, in the cone of light reflected on the water, I resort to the ordinary pyro-gallic acid developer. In this case the plate requires previous washing.

These are the operations which I consider sufficient for obtaining lunar photographs (selenographs). In publishing them, I believe that I have the right to hope that these processes, which are very simple, although their description is very long, will be practiced by experimenters more skilled than I am, and that the scientists who abound amongst photographers will find out better processes and arrive at more important results than those which I have obtained. I have opened a new route; it is for others to follow and to excel.

I, for myself, will not desert selenography entirely, but for the present I am much interested in experiments on the curative properties of the sulphate of iron, the iodides, the bromides, and ether, but particularly the cyanide of potassium. These faithful but terrible companions of the photographer can perhaps ere long be restored, if we only subject them to a general inquiry. This at least is my belief.

Very respectfully,
E. P. OGIER.

ON VARIOUS PHOTOGRAPHIC SUBJECTS.

BY M. CAREY LEA.

I. MANAGEMENT OF A DISORDERED NEGATIVE BATH.

THE advantages of *fusing* over those of simply boiling down a negative bath have scarcely been brought as prominently forward as they deserve to be. It is true that the fusing is a little trouble, but on the other hand, we get rid of the diluting, the filtering, and the evaporating of such great quantities of liquid.

For if a bath is not to be fused, the iodide of silver must be got out of it by dilution,

and to accomplish this effectually, it is usual to dilute threefold. In doing this, the writer believes that he was the first to point out the great advantage gained by pouring the bath into the water used for diluting, and not, as previously done, adding the water to the bath, an advantage now generally understood and availed of. This dilution, nevertheless, gives a threefold quantity of liquid to evaporate.

Where the bath is intended to be fused, there is no need for previous diluting, but the solution is evaporated down just as it is, to dryness. It is generally convenient when the whole is reduced to a small bulk, and is still liquid, to transfer it to a smaller vessel, as the large evaporating basins are unsuitable for the fusing. As the evaporation is carried on, the liquid solidifies to a white cake; then on raising the heat higher, this fuses to a liquid as thin as water, and nearly as transparent. Previous to the complete fusion, there is a continuous effervescence, which is probably owing to the decomposition of the nitrate of ammonia, which is formed plentifully in all baths with which collodions containing iodide or bromide of ammonium are used. The *red fumes* sometimes spoken of I have never seen. Some of the nitrate is undoubtedly decomposed, and converted to nitrite, but this is not accompanied by any visible escape of nitrous fumes.

After the mass has remained in quiet and complete fusion for three or four minutes, the heat should be turned off; not, however, all at once, but at first left for several minutes rather low, and then first turned completely off. Attention to this will make the strain much less upon the fusing vessel, and enable it to be used many more times. It seems scarcely necessary to say that fine and good porcelain, such as is manufactured expressly for chemists' use, is alone suitable.

In the operation of fusing, we not only get rid of the alcohol and ether, but of other impurities. The iodide of silver appears to lose its solubility by the fusion, and when the fused cake is dissolved in water, quantities of iodide separate out. That this separation of iodide may be as complete as possible, the cake must not be dissolved in a small quantity of water, and then this solution be

diluted, but having determined on the quantity of water to be used for its solution, the cake should be put into this (tepid water is best), and be actively and thoroughly stirred about with a long glass rod until solution is complete. For if a saturated or very strong solution were at first made, this strong solution would be much more capable of taking up the powder of iodide, and then, once taken up, of holding part of it even after a subsequent dilution.

Non-volatile organic bodies can scarcely escape destruction by the fusion. It is probable that much of the nitrate of ammonia is also destroyed, for although the temperature at which it is resolved into nitrous oxide and aqueous vapor is a few degrees higher than the fusing-point of nitrate of silver (219° C.), yet the temperature of the fused mass would quickly rise to the necessary point.

The nitrate of cadmium with which the bath becomes more and more charged is not got rid of by fusing.

As the nitrates of ammonia and of cadmium both fuse at temperatures considerably lower than nitrate of silver, they tend to act as fluxes, and to facilitate the fusion of the silver salt.

After fusion, the cake of nitrate is a radiated, translucent mass, dissolving easily in water, and leaving behind a considerable quantity of impurities rendered insoluble, and thus eliminated by the fusion.

II. CAN A BETTER DEVELOPER BE FOUND?

It is surprising that there should be so little original research made in the direction of developers. It is by no means certain that we have yet found the best of all existing substances capable of bringing out the latent image.

For a long time gallic acid was supposed to enjoy this property alone. Then it was found that pyrogallie acid acted still more powerfully. Next came sulphate of iron, yet more energetic: this was long in making its way and supplanting pyrogallie acid. It has been said that *morphia* is capable of acting as a developer and evoking the latent image, and I have shown that *haematoxyline* also possesses this property.

As yet these five substances are the only known developers. There is no reason to suppose that they are all that exist, or that they are necessarily the best. The search for new developers presents great interest, and has been little prosecuted.

In this connection the following remarks may have some interest. All the known developers are *reducing agents*, that is, they are capable of combining with oxygen, and consequently capable of deoxygenating other bodies. Also of abstracting those bodies which play a part analogous to oxygen, as chlorine, bromine, and iodine. But the converse by no means follows. That a body is capable of deoxidizing is no proof that it is capable of developing, yet it is, undoubtedly, among such classes of bodies that new developers must be looked for.

Many bodies capable of acting powerfully as "preservatives," and readily oxidable are totally incapable of acting as developers. *Cloves* present a remarkable example of this. The oil of cloves is so powerful a reducing agent that it will rapidly reduce silver to the metallic state. The decoction of cloves is a powerful preservative, and affords excellent dry plates. Under these circumstances it appeared very probable that the decoction of cloves would act as a developer. I subjected this matter to careful experiment and found cloves perfectly incapable of developing. So too the cochineal preparation which I use for dry plates, proved also wholly incapable of developing, and the same was the case with flavin, another preservative of no small power.

As further experiments are made in this direction, other developers will, doubtless, be discovered. Let us hope that we may in this way obtain some one more powerful and more useful than any that we have as yet.

III. TEA DRY PROCESS.

Some time back, Mr. H. J. Newton proposed an infusion of *black tea* as a preservative for dry plates. I included this preservative in the very extended examinations that I have given to preservatives for dry work, and found it very successful. Next to the two which I specially prefer, pyrogallie acid and the cochineal preservative, I place the tea. It is, in my opinion, alto-

gether preferable to tannin, coffee, and the older and more known preparations, and it seems to have scarcely been tried as extensively as it deserves. It is more sensitive than coffee or tannin (though less so than pyrogallie acid or cochineal), and gives clean bright images, and pleasant-looking negatives. In using coffee, though it generally works easily enough, I have sometimes had surface-markings of a sort quite peculiar to that preservative—these have never shown themselves with the tea.

In one particular, tea acts differently from almost any preservative that I have tried. Cochineal, pyrogallie acid, coffee, tannin, flavin, and many others, are improved by the addition of gum arabic and sugar; indeed, the best results are only to be obtained with them when this addition is made. Tea, on the contrary, did best without. Hot water was poured on the tea, say about ten or twelve ounces on half an ounce of black tea, and this was set in a warm place for some time to infuse. At the end of an hour or two the infusion was filtered, and the washed plate was slipped into this bath without any other addition of any sort, taken out, dried, and backed.

As compared with pyrogallie acid, tea gives equally clean bright plates, and perhaps rather brighter than cochineal. But when all three are given equal exposures on the same object, more detail is found in the pyrogallie acid and the cochineal, than in the tea. Similar comparative trials made with the tea against coffee, and against tannin, giving these the advantage of gum and sugar, which aids them greatly, showed a marked superiority in the tea.

I have again, since the above was written, carefully compared its results with those afforded by pyrogallie acid, and am confirmed in my opinion that pyrogallie acid is decidedly the better of the two.

Study to Improve.

—LONG winter evenings and rainy days should be taken advantage of by you to read up and improve yourself. Do not neglect them. The future good of your art requires it.

NOTES IN AND OUT OF THE STUDIO.

BY G. WHARTON SIMPSON, M.A., F.S.A.

Acid Conditions of the Toning Bath: A New Toning Bath—The Collodio-Bromide Process.

Acid Conditions in the Gold Toning Bath.—A New Toning Bath.—The term “alkaline,” used in relation to the solution of chloride of gold employed for effecting the toning of prints as a separate process, instead of in conjunction with the process of fixation as in the old toning and fixing bath of hyposulphite of soda and gold, has become so familiar that few photographers doubt the importance and necessity of the alkaline condition. Nevertheless, it is doubtful whether the term itself, and the condition when present, ought not to rank amongst popular photographic errors.

That the plan of conducting toning and fixing as two separate and independent operations is an advantage, and has been highly conducive to the permanency of silver prints, there can be little doubt; but that the separate gold toning bath should be alkaline is by no means certain, and as right theory is conducive to right practice, a brief reconsideration of the question may not be uninteresting.

I have just received a brief communication from my friend Dr. Liesegang, editor of the *Archiv*, inclosing me some fine examples of toning produced by a bath somewhat different in preparation from the majority of baths in common use. He informs me that the plan of making the bath is based upon the suggestion I made some time ago in relation to the platinum toning bath. In this bath I neutralized or rendered alkaline the solution of bichloride of platinum by means of carbonate of soda, and then made it acid by the addition of nitric acid. By this means hydrochloric acid was got rid of and another acid substituted. The real object of adding an alkali to the gold solution is not to render it alkaline, but to get rid of hydrochloric acid, the presence of which is mischievous in several ways. It tends to bleach the print and to produce “mealiness,” and it also retards the precipitation of gold on the print. In many cases the salt added

to the gold solution merely neutralizes the free hydrochloric acid, and if added in such proportion as to cause an alkaline condition the gold bath quickly loses toning qualities. When a salt like acetate of soda is added to the chloride of gold solution a slow decomposition ensues, by which the free hydrochloric acid is neutralized, chloride of sodium being formed, and acetic acid set free. This bath, instead of being an alkaline bath, is really an acid bath; but the acid present does not bleach, nor does it retard the deposition of silver but rather facilitates it. The acetate bath is justly a great favorite; but it requires preparation a day or two in advance of its use in order to permit the slow decomposition to which we have referred to take place; and if the bath be used too early it is often found to bleach. Dr. Liesegang prepares a similar bath by much more direct means, and finds it to answer perfectly. Following the plan I adopted in my platinum bath, he neutralizes the gold solution with carbonate of soda, he then renders it acid, not with nitric acid, but with acetic or citric acid. The precise proportion of alkaline acid depends on the condition of the chloride of gold. It is important, he states, to secure first an alkaline condition sufficient to change red litmus paper to a decided blue, and then in adding the acid to add sufficient to produce a definite red tint. He then leaves the solution standing for an hour or two in the light, under which process it becomes colorless. It is then in fine toning condition, and will keep indefinitely. In preparing the solution one grain of chloride of gold in one ounce of water is used; but before use it is diluted with from four to ten times its volume of water. The special advantages of the bath are extreme delicacy and brilliancy in the prints, fine color, absence of bleaching, and certainty of result.

The Collodio-Bromide Process.—Col. Stuart Wortley has recently made some further modifications in the collodio-bromide process. I shall not venture to occupy your pages by any allusion to the controversy at present in progress in this country, between Mr. Carey Lea and Col. Wortley, as to the extent to which the latter gentleman has a right to claim ownership in the process as

he at present works it. I merely mention the matter to explain that Col. Wortley has recently mentioned many points of his latest practice, in order to show in what he has essentially modified the process. I feel it right, moreover, in passing, to put on record the general appreciation in this country of the value of Mr. Lea's labors in improving the process in question, and bringing it to a high state of perfection. Col. Wortley has given up the use of aqua regia in the collodio-bromide emulsion, finding that the acids have what he terms a "rotting" effect on the collodion. Many photographers are doubtless familiar with the fact that collodion-chloride of silver, with free nitrate of silver present, has a tendency to become somewhat decomposed by keeping, giving a rotten film which readily tears and splits. I presume that a similar effect is produced by the aqua regia, which will undoubtedly have a tendency to act on the pyroxyline. Col. Wortley finds that an effect similar to that produced by the addition of aqua regia, is obtained by adding a chloride to the emulsion, the presence of a trace of chloride of silver being in his estimation the real element of the cleanliness and brilliancy attributed to the aqua regia. In place of the pyrogallie acid preservative of Mr. Lea, Col. Wortley has adopted the gum gallic preservative of Mr. R. Manners Gordon, and he attributes both greater sensitiveness and better keeping qualities to the change. He saturates the collodion with nitrate of silver, and uses an almost unlimited quantity of ammonia in developing, having first, however, applied plain pyro solution, and allowed the film to get well saturated with it before applying the ammonia and bromide solution. I may here add that Col. Wortley has repeated and verified my experiments in reproducing negatives, by the application of nitric acid to a transparency on an unfixed collodio-bromide plate. He has obtained complete success in trying the process.

MR. R. H. BLIVEN, Toledo, Ohio, has sent us some fine stereo views of the ruins of Chicago, which include views from Wabash Avenue, of the Court House, Churches, Hotels, &c. He advertises 48 varieties.

GERMAN CORRESPONDENCE.

Consumption of Varnish, Albumen, Intensifier and Washing Water per square foot—The Value of the Permanganate of Potassium—Faults of Albumenized Plates—About Travellers, Cameras, and Landscape Lenses.

IN my last letter I spoke of the consumption of different chemicals in the preparation of negative plates; permit me now to correct an error. So far as I can remember I stated that the amount of varnish necessary to varnish a plate, would be equal to three-fourths the amount of collodion: this is not true; the varnish which is necessary amounts only to one-third, and each square foot of plate requires only about seven and a half cubic centimetres of varnish.

In my trip through the Carpathian Mountains, I have ascertained the consumption of the other chemicals, and subjoin the results. For a square foot of plate I use twenty-five cubic centimetres of albumen solution for albumenizing the plate, also four ounces of water for washing after development, and from one hundred to one hundred and fifty cubic centimetres of cyanide of potassium solution, of the strength of 1:25 for fixing; with a more diluted solution from one hundred and eighty to two hundred cubic centimetres would be required. The washing, after fixing, requires, of course, a much greater amount of water, and as water on high mountains is generally a very scarce article, I prefer to fix my plates when I return home, having then plenty of leisure for fixing and washing.

The quantity of silver necessary for intensifying varies with the nature of the light, and the brilliancy of the collodion.

With a rather slow-working collodion I use for the square foot, forty-eight cubic centimetres of nitrate of silver solution, of the following composition:

2	parts of Nitrate of Silver.
2	" Citric Acid.
100	" Water.

I have to ask the reader's pardon for mixing indiscriminately in these statements, the terms pounds, cubic centimetres, square feet, &c. In the mountains I had not the means of determining everything by one and the

same standard. I had to help myself partly with weights, partly with measures.

I noticed in my mountain travels a peculiar defect in the picture, which was occasioned by the water containing lime; in intensifying the plate a white precipitate of citrate of lime would be formed on the plate.

Again, I had an opportunity of noticing the excellent services which the permanganate of potash renders the photographer. A small piece of pine wood dropped into the nitrate bath, and remained in it for perhaps half an hour, while I was absent from the tent. The bath turned brown at once, and the plates were veiled and perfectly insensitive. My headquarters were several miles distant, and as I was only supplied with the most necessary articles, it would have been impossible for me to continue my work if I had not had the permanganate of potash; about five drops of it (solution 1:50) were sufficient to destroy the foreign organic substances which the bath had extracted from the wood, and in a few minutes the bath was completely restored and worked like a fresh one.

I will here refer to a kind of fault in the negatives—I mean those produced by albumenizing. We are indebted to America for the albumen process, as a substitute for the tedious plate cleaning. It has been generally adopted here, partially with good success, but over and over again we hear of defects, and these happen even to the cleanest and most careful operators. In view of these facts it surprises me that I have never read in American papers of similar complaints, and it almost seems as if the American photographer had not to contend with them. I leave it to your readers to answer if this is so. Here in the mountains I have observed peculiar spots, of a five or six cornered shape, and placed side by side like the cells of a honeycomb, but smaller; they can be seen on breathing on the albumenized plate, and become dark after development; sometimes they are only present in the lights. I have never observed this in Berlin, but here very frequently, and it may be that the limestone water of these mountains has something to do with it.

Mr. Grasshoff employs carbolic acid as a preservative of the albumen solution. To

the white of one egg three to five drops of carbolic acid are added; the mixture is shaken for half an hour, and the clear part is diluted with ten to fifteen times its volume of water and filtered.

In travelling the albumen process does not offer the same advantages as at home. We have too often to contend with dust; it is better to wash and dry the plates thoroughly at home, and to pack them between clean pieces of blotting-paper, so that the plates are entirely covered (the placing of small pieces of paper between the plates is objectionable). Such plates are easily made ready for exposure; breathing on them and rubbing with a towel is all that is necessary.

Only a few words more about travelling, cameras, and stands. From England we receive tripod stands which are extremely light and compact; they are easily folded together; they are set up in half a minute; all the screws are fastened to the stand and cannot get lost. These are great advantages, and still all these tripods have a grave fault; they shake too much in the wind.

The English camera of "Meagher" proves very valuable, it has the only fault of being a little too heavy. The box is square, admitting of placing the plates either way, *i. e.*, the long or short side horizontal without changing the position of the camera; this seems an advantage, but it necessitates to make the camera much larger than the plate for which it is intended, and this makes it, of course, more clumsy and heavier, besides the advantages are not very great. To me it has sometimes happened that I have placed plates in the plate-holder, with the longest side horizontal, and only at the last moment I discovered that a vertical position would be preferable; I had then to return to the tent and change the plates: this is inconvenient and takes much time. In this respect the so-called Philadelphia box is preferable. It can be removed in a moment, and the position of the plate in the plate-holder does not require a change. The Philadelphia box has the advantage also of being much lighter, but the disadvantage is that the focussing screws and the platform screw get easily lost; these should be firmly connected with the camera; it would also be desirable to have the handle of the focussing

screw a little larger, as it would turn much easier. It is a great advantage in the American cameras that the front shutter of the plate-holder can be drawn out completely; this is unfortunately not the case with our European cameras; the shutter-board is fastened to the holder, and when drawn out offers a large surface to the wind.

In regard to lenses for landscape purposes, I give as the result of a large experience, the preference to Steinheil's lenses. They have a field of view of sixty degrees, and this is in most cases more than sufficient. Compared with ordinary landscape lenses, these objectives possess a great amount of light, which enables the photographer to focus easily, and admits also of the taking of groups in the open air; besides they are light, easily transported, and cheap.

For my camera, $8\frac{1}{2} \times 6\frac{1}{2}$, I use two Steinheil's, No. 2 and No. 3. The former I use when I need a larger field of view, the second when I wish to have the main object somewhat larger and the foreground smaller.

Pantoscope and similar instruments I use only when the field of view is extraordinarily large, and the distance cannot be increased.

Yours, truly,

DR. H. VOGEL.

THE EXECUTIVE COMMITTEE OF THE N. P. A.

THE regular quarterly meeting of the Executive Committee of the National Photographic Association, was held on Tuesday evening, October 17th, at No. 1153 Broadway, New York, Messrs. Bogardus, Wilcox, Adams, Rhoads, Moore, and Wilson, being present.

The minutes of two former meetings were read and approved.

The Local Secretary of Philadelphia, Mr. W. H. Rhoads, presented his report with his vouchers for examination.

The following extracts are condensed from his report:

"I have received as proceeds:

From the sale of tickets for the Exhibition and	
Entertainments at the Academy of Music, for	
lumber, hardware, &c., the sum of	\$1124 50
Loan from A. Moore, Treasurer,	220 00

CONTRIBUTIONS FROM

Messrs. Powers & Weightman, Philad'a,	100 00
" James F. Magee & Co., "	100 00
" A. M. Collins, Son & Co., "	200 00
" Wilson, Hood & Co., "	50 00
" Nixon & Stokes, "	50 00
" Rosengarten & Sons, "	20 00

\$1864 50

"The above contributions were secured by Mr. Edward Cope, of the firm of A. M. Collins, Son & Co., Philadelphia.

"I have paid out as expenses the sum of \$1887.73, leaving balance of \$13.23 due me. The rent of Hall and Academy were authorized by the former Executive Committee, and paid by the Treasurer. The newspapers, with four exceptions, made 35 per cent. discount from their bills.

"Prof. Morton and Mr. Black charged only their actual expenses of freight on apparatus and material used, and I recommend a vote of thanks to them and to those who contributed to our funds.

"I wish to return my sincere thanks to our worthy Permanent Secretary, Mr. Edward L. Wilson, for his kindness and assistance through all my trying duties. Had it not been for him I fear I should not have succeeded in getting through.

"Messrs. Moore, Cremer, and others, composing the Committee of Arrangements, rendered me invaluable aid also.

"With this I present a detailed statement, together with my vouchers, and respectfully ask for a committee to examine my accounts.

"WILLIAM H. RHOADS,

"Local Secretary N. P. A."

The report was accepted, and referred to the chairman as a committee to examine.

Mr. Albert Moore, the Treasurer, reported \$423.97 balance in the treasury.

A vote of thanks was given Prof. Morton, Mr. J. W. Black, the Philadelphia gentlemen who contributed as above, and also to Mr. Rhoads for his untiring zeal in promoting the harmony and success of the late Exhibition.

Messrs. Bogardus and Wilson were appointed a committee to devise some means of inducing larger exhibitions of foreign work at our Annual Exhibitions, to report at the next meeting.

The President now referred in a feeling manner to the great loss sustained by members of our fraternity in Chicago, and expressed the hope that something would be done by the committee to relieve them; he also read several letters from photographers on the subject. The matter was discussed by all present, and action taken by passing the following unanimously:

WHEREAS the great fire in Chicago on the 6th, 7th, and 8th insts., having completely destroyed the majority of the photographic galleries in that city, therefore be it

Resolved, That we, the Executive Committee of the National Photographic Association of the United States, in session in New York, this 17th day of October, 1871, tender our earnest sympathies to those of our fraternity who have suffered by this calamity.

Resolved, That in order to show our sympathy in a more substantial way, the Permanent Secretary of our Association be ordered to issue a circular to the members of the Association, and to all interested in photography, calling upon them for money to aid those photographers who have suffered loss in the manner alluded to. Moreover, to issue a similar call through the photographic magazines of the country for the same object.

All funds to be sent either to A. Bogardus, Esq., President, 1153 Broadway, New York, or Albert Moore, Treasurer, 828 Wood Street, Philadelphia, to be held, subject to the order of this committee, to relieve the needs of the suffering photographers.

Resolved, That all contributions be asked for by November 15th, as the committee wishes to distribute them.

The Permanent Secretary was instructed to secure a detailed statement of the losses by the fraternity in Chicago, and so far as he could, their actual necessities.

On motion, adjourned.

PHOTOGRAPHIC MOSAICS FOR 1872 is in press. The usual space will be allotted for advertisements, and parties wishing insertions should have the matter in our hands by November 15th, promptly.

The Fate of the Photographers in Chicago.

LETTER FROM MR. G. A. DOUGLASS,
Sec'y of the Chicago Photographic Ass'n.

CHICAGO, CITY OF RUINS,
Oct. 15th, 1871.

EDWARD L. WILSON.

DEAR SIR: Thanks, *many thanks* for your very kind letter just received.

Your generous sympathy so promptly extended is most gratefully appreciated, and I assure you will be ever remembered by Mr. Stevens and myself, and I again thank you for the photographers who have suffered from this great calamity, and for our Society. At this present time I cannot enter into full details of this most terrible fire, but I assure you my earliest leisure will be improved in giving you full particulars, of interest to you and the fraternity. One week ago to-night, Chicago stood, the wonder and pride of the world; now as I write it lies prostrate and desolate, smouldering ruins where stood the most stately and beautiful buildings. The pen is powerless to convey to the minds of those not witnesses of the scene the utter ruin which meets the eye and appals the heart, and you cannot realize the suffering and loss that attends this fearful calamity. Your telegrams furnish details that I have no time at present to note, but at the earliest possible moment I will furnish you with a complete record. The Chicago Photographic Society lost all its records, which were burned in my desk at the store, where I had them writing up the minutes of our last meeting, and copying the paper read before the Society by Mr. Smith, for publication in the *Photographer*. I send you herewith a list, as far as I am able to complete it, of the photographers who were sufferers by the fire. Almost all lost *everything*. Shall be able in a few days to get the names and location of each party; until then this will do.

Photographers.

A. Hall,	Lake Street.
J. W. Wykes,	" "
O. F. Weaver,	" " 2 galleries.
Copelin & Son,	" "
B. Kilholz,	" "
G. S. Moore,	" "

T. B. Williams, South Clark Street.

A. Newdick, " " "

B. Rider, " " "

S. Wing, " " "

J. H. Abbott, " " "

H. Rocher, North Clark Street.

H. Pietz, " " "

Niedhardt, " " "

Barnard & Matthews, Washington Street.

S. W. Sawyer, " "

E. L. Brand, " "

J. H. Abbott, " "

C. D. Mosher, " "

S. M. Fassett, " "

There are probably about twenty others that I do not know the names and location of, but which will be collected and noted down very soon, and if possible the loss of each.

Photographic Stock.

Charles W. Stevens, 150 Dearborn Street.

B. B. Appleby, 109 and 111 Wabash Avenue.

Rice & Thompson, 135 and 137 Lake Street.

A. Hesler & Co., 105 Lake Street.

J. B. Batchelder, 180 " "

We have secured a store at 564 West Madison Street, and are ready for business. R. B. Appleby at 15 South Halstead Street; the others, I believe, are not yet decided.

We saved nothing from our stock, and lost all of our books and papers; the safe when opened being filled with cinders and charred remains of its contents.

We are up and doing, and very soon our customers will be served as usual.

In behalf of our Society I beg leave to tender to our sister Society of Philadelphia, most heartfelt thanks for the prompt action taken for our relief, and the fraternal sympathy expressed, which I trust you will accept until we can better express our gratitude.

Hastily yours,

G. A. DOUGLASS.

Sent you a paper in this mail.

"A CALL FOR RELIEF."

OUR readers, so far as we could reach them, have been served with a copy of the resolutions of the Executive Committee of the National Photographic Association, which appear on the opposite page, and

many of them have most generously responded already.

We do not think it necessary to say much to try to arouse your generosity in behalf of the suffering members of your fraternity in Chicago. You have learned through your local newspapers of the dreadful fire in that once beautiful and wonderful city, and of the amount of suffering and loss which it has caused. You have also read of how nobly the people of our own and foreign countries have responded to the cry for aid; how trades-unions, and societies, and brotherhoods have joined hands in rendering all the help in their power to the members of their several fraternities.

This is unspeakably noble, and is more to the credit of our country than the glory won in battle.

We think we do not mistake the photographic fraternity of this country, when we express our belief that they will not be slow in responding to the call of our Executive Committee. Let all who can, give something. Be not afraid to give a little if you cannot give much. You will not be judged by the *amount* you give, so much as you will by your *willingness* to give. Only act *quickly* in the matter. The actual necessities of the case are not learned as yet, but the great care exercised by the Executive Committee will secure an equable distribution of the funds where they are most needed, and where the necessities are the greatest. A full report of the receipts and the expenditures will also be given. On another page we print a letter from Mr. G. A. Douglass, in answer to our inquiry as to the actual state of affairs among our fraternity. It is not as full a record as we hope to get, but it tells a sad tale.

There are some, of course, who will not need any assistance, and who are already, Phoenix-like, at work again. But there are those whom many of us know who have lost their all, and we must help relieve their present wants, if nothing more.

It is understood that the funds sent are to be used only for photographers. A word of caution too, concerning the sending of money in letters. Try to get a post-office order, draft, or check, and don't send money if you can help it.

We now turn the subject over to you, knowing that you will respond as liberally as you can.

NOTICE TO THE SUFFERERS.

If the photographers who suffered by the fire in Chicago, will give us all the particulars concerning themselves and others, promptly, we will be very glad of the favor.

Chicago Photographic Association.

THE regular monthly meeting of the Chicago Photographic Association was held the week before the fire, at S. W. Sawyer's studio, No. 24 Washington Street, President Hall in the chair.

The name of Frank M. Clettenberg was proposed for membership, and on suspension of the rules, he was admitted.

Mr. Joshua Smith read an interesting paper on light, in which he claimed to have originated a new mode of illuminating models.

Briefly, Mr. Smith explained that his room was on the ground floor, running east and west, 42 by 15 feet, and three feet at the lower and 12 feet at the higher point, with north, top, and side-lights—the top-light 22 feet long by 5 feet wide, and the side-light 22 by 6 feet, reaching to within 2 feet 6 inches of the floor. The outside of the skylight was covered by a combination of blinds, 18 in number, and 7 feet long by 2 feet 6 inches wide and 1 inch thick, made in the style of a four-panel door, forming six sections, each section containing six blinds, which could be opened and regulated by ropes running on side pulleys from the inside at any desired point to operate one or all, dispensing with curtains entirely, which were always a source of trouble and seldom perform their duties except in skilful hands. The blinds, being made of wood, served to protect the glass from hail-storms, and kept the rays of a burning sun out of the studio, thereby lowering the temperature at least twenty degrees, and enabling the operator to illuminate his subject with nicer precision. The blinds did not obstruct the light much, if any at all, and at times they seemed to increase the light by reflection.

The paper was accepted by the Association with thanks, and the Secretary was instructed

to send a copy of the same to the *Philadelphia Photographer* for publication.

Discussion followed on the subject of light by Messrs. Abbott, Sawyer, Moore, Smith, and others.

Some beautiful examples of 10 x 12 and stereoscopic views of Jefferson Park were presented for examination by Mr. Greene; also some fine stereoscopic views, by Mr. Hine, of the geysers, and burning springs, and soda mountain in the Yellowstone country, made during Mr. Hine's absence as photographer of a government exploring party.

Mr. Greene moved that, at the next regular meeting, every member bring in a specimen of his work for exhibition. Seconded, and carried.

The chairman announced that at the next meeting, Mr. Douglass would read a paper on collodion, and that at the second meeting hence, Mr. Hine would give a lantern exhibition.

Mr. Sawyer moved that each and every member be requested to prepare a paper upon any subject connected with photography, and read the same at any meeting.

The Association then adjourned to meet on the first Wednesday in November next at the same place.

PENNSYLVANIA PHOTOGRAPHIC ASSOCIATION.

THE stated monthly meeting of the Pennsylvania Photographic Association was held at the store of Messrs. Wilson, Hood & Co., 822 Arch Street, on Monday evening, Oct. 9th, President Wm. H. Rhoads in the Chair. Forty-one members answered to the call of the roll.

Records of previous meeting read and approved.

Cornelius Ripley was proposed, and elected a member of the Association.

The committee on room reported that they had not been able to find a suitable room. The members of the committee found but little time to attend to it. On the suggestion of the committee, it was moved and voted that three additional members be added to the committee. The following

were appointed: John R. Clemons, C. Faser, and H. C. Phillips.

Mr. Shoemaker being called upon for a paper, presented a piece of *back-board*, having a strip of sap on one edge, and a spot of balsam. He found the picture this board had been against, stained directly opposite the balsam. It had gone completely through the mounting board and the picture, taking the color entirely out of it. He had seen another picture stained when there was a knot in the back-board. He suggested that photographers and picture-frame makers should be careful to use clear boards.

The subject of making quick pictures being called up, Mr. Schreiber said he proposed the subject more for information than for anything he had to say.

Mr. Gihon thought more depended upon the instrument than the chemicals in making quick work. He had a pair of half size Voigtlander tubes that he thought would make an outdoor view as quick, and cut it as sharp as anything could be desired; he thought them very superior instruments for quick work.

Mr. Schreiber spoke of the different lenses he had used, and said he had found a new lens by Zentmayer the best for quick work. He exhibited several 8 x 10 prints made in one second with the lens referred to. They were considered very successful.

Mr. Rhoads spoke in favor of the Ross lens as working very quick, and giving excellent definition.

Mr. Clemons thought the collodion had a good deal to do with making quick work. He spoke of the fact that a collodion would work well and quick when it was fresh and new, and after a few days it would hardly make a negative under any circumstances. He thought care should be taken to get cotton free from acid.

Mr. Saylor said the question of gun-cotton was a very important one, and he believed our success in making quick pictures depended very much upon our having a good sample of cotton. Of course everything else must be in good condition; but he felt that there was more variation in the cotton than in anything else we use. He wished we might have some member of the Association that could manufacture us a good reliable cotton.

Mr. Bell said there was a young member with us that was making some very fine cotton, as he had used it and proved it equal to the best. He said he referred to Mr. Humbert, who would be glad to supply the members with samples, that they might prove its quality.

Considerable discussion followed on high and low temperature, long and short fibre, &c. It being explained that cotton made at a high temperature was of short fibre, and *vice versa*, the long and short fibre being the result of the temperature at which it was manufactured, rather than the kind or quality of cotton in the original state.

Mr. Bell stated it as his opinion, that more cotton had to be used when it was made at a high temperature; that such cotton was the most intense, and that it worked slower. Cotton made at a temperature of 140° was the best for gallery work, and that at 160° for landscape work.

The bath, collodion, and developer were also discussed, and various opinions advanced, and claims advocated.

The question of "skylights and lighting" was next taken up, and Mr. Trask was called upon to open the discussion. He having recently constructed a large light on a somewhat new principle, the members were anxious to hear his views. He described his light as thirty-eight feet long by thirteen feet wide, with side-light same length. He explained the advantages of a large light, the principle being that he can use as much or as little as he pleases; especially was it adapted for shadow pictures, giving soft shadows and perfect detail. Some discussion followed on the merits and demerits of large and small lights. It was claimed that a large light gave the photographer an opportunity to study the variety of effects to be produced, and educated him to a better understanding of the nature and management of light, while on the other hand a small one was easier worked, and better effects could be produced from the fact that the light was more concentrated. The old daguerreotype was referred to as proof of the advantages and excellence of a small light. The discussion was participated in by Messrs. Saylor, Clemons, Bell, Snell, and Chute.

Both questions were discussed with a good deal of spirit and earnestness. As an experiment, the discussion proved highly successful, and claimed the attention of the members to the end. It was eminently practical, being participated in by men who gave their everyday experience and practice, and argued more from a desire to gain knowledge than to impart it.

Mr. Gihon made some remarks in reference to the terrible calamity in Chicago, whereby the leading photographers there have suffered the destruction of their galleries, and suggested that some action be taken for their relief. Mr. Wilson said it was not definitely known whose galleries were destroyed, and suggested that a committee be appointed to confer with the Chicago Society, and tender them our sympathy and such aid as we may be able to offer.

On motion, the following were appointed a committee for the above purpose: Edward L. Wilson, John L. Gihon, and R. J. Chute. Adjourned.

NOTE.—The room committee of the Pennsylvania Photographic Association have engaged a commodious room at the S. E. corner of Tenth and Walnut Streets, entrance on Tenth Street, where the future meetings of the Association will be held.

FERROTYPERS' ASSOCIATION OF PHILADELPHIA.

THE regular monthly meeting of the Ferrotypers' Association was held at Mr. Trask's Gallery, No. 40 North Eighth Street, Oct. 3d, 1871. Mr. Wittemore in the chair.

The word "Tuesday" in the By-Laws is to be stricken out and "Monday" inserted instead. So ordered by a majority of voters present.

Mr. J. W. Berth, of Chester (a member of the Association), gave a method for cleaning ferrotype plates. Wash the plate well with clean water; let drain a few moments, then flow the plate with alcohol; let drain again till dry, then it is ready for use, the alcohol removing all stains.

A motion from Mr. Trask was passed that the Secretary be authorized to correspond with some (one or more) plate manufacturing

company, to see if the quality cannot be improved, as the plates now in the market are of very inferior quality.

Adjourned to Mr. Lathrop's Gallery, Eighth and Market, Nov. 6th, 1871.

C. L. LOVEJOY,
Secretary.

COMMENDABLE ENTERPRISE.

OUR readers will not censure us for calling attention to the enterprise displayed by Mr. C. W. Stevens, late of No. 150 Dearborn Street, Chicago, in having a stock of photographic goods open in a week from the time his store was destroyed by fire. His store was burned about 2 A.M., on the eventful Monday, October 9th. Instead of brooding over his losses, with a stout heart he at once set to work to find another store. By 5 P.M. he had succeeded, and was on his way to New York, Philadelphia, and Boston, to purchase new supplies. On Thursday at 11 A.M. the goods were on the way to Chicago. They would have gone sooner, but Mr. Stevens was delayed on the road twelve hours. When he left Chicago it was still in flames, but his customers would want supplies, and his duty to them was to be ready. No doubt they will fully appreciate his energy as they have done heretofore.

When we saw him he was in good spirits, and we hope he will be kept so. His right hand man, Mr. G. A. Douglass, is still with him, and they are ready for any orders that may come to them.

As Mr. Stevens's books and papers are all destroyed, his business will, of course, be somewhat confused, but we say without his consent, that we hope every man who owes him a dollar will pay him *now*. He has our best wishes for his success.

RESPONSE TO MR. MORGENEIER.

DEAR SIR: Mr. Morgeneier has seen fit to answer the charges of the German Photographic Society, by quoting Shakspeare and others, by calling us "Gothamite Germans" and himself "the humble Nazarene," who wishes to pursue the "even tenor of his way" on a "broad and unobstructed plat-

form," and have "peace as the watchword." Now, to all this the German Photographers might answer by *also* quoting Shakspeare, thus: "Alas, *poor* Yorick!" But the *Society* declines to have anything further to say in the matter.

I hope it is clearly the duty of this as well as of every other photographic society to watch and work for the interests of the photographic craft. The Germans found the book in question had been spoken of in Berlin as an absurdity, containing nothing new whatever, being very small and extravagantly expensive (\$1.50), and besides, being almost a literal translation of Hartman. It was moved and carried that the book be examined, and if the charges were found correct to publish it in our minutes, and if found otherwise to vindicate Mr. M., and let the *Berliners* know of it, for not only the committee, but the whole Society took an active interest in the matter, and after two months [large bodies move slowly] the result of the investigation was made public, and the labors of the Society ended there.

Now, as I am one of these "Gothamite Germans," I request the privilege of a few words in an unofficial way.

Mr. M. says in the first part of his *defence* that the charges of the N. Y. G. S. are "base fabrications," and that it is "not safe to say" that his book "is almost a literal translation of Mr. Hartman's article," and that "his translator (!) is not acquainted with the German language." I am convinced of the *truth* of the latter assertion, for if Mr. M.'s "oral translator" had been acquainted with the German language he would not have made such ridiculous blunders as translating *plastic* into *classic*. Hartman says, "Durch Aufhellen der Nasenspitze wird die selbe sofort losgelöst und wird *plastischer*;" in substance, "The nose will relieve at once; by lighting up the point of it, it will become more plastic; which means that the lower point of the nose (*nasenspitze*), which comes often as dark as the shadow under the nose itself, should be made a little lighter, in order to relieve."

Now Mr. M.'s *oral translator* (!) got hold of it in this curious manner, confounding

possibly, shadows with high-lights, in fact not knowing at all *what* to make of it, he furnished the following sublime passage to an admiring world: "Intensifying the point of the nose with a pencil gives it a classical appearance." (*O sancta simplicitas!*) The "point," in this case, has to be greatly intensified before I or anybody else can see it. Does Mr. M. know *what* a classical nose is? Will Mr. M. undertake to make a *nez retroussé*, or the nose of a bulldog classical by intensifying the point of it with a pencil?

You will see, Mr. Editor, that Mr. M. is right in saying that it is not safe to call his book (!) a *translation*, and that, "*at most, the extracts furnished [by us], for comparison proceed that two authors, writing upon the same subject, for the same purpose, will be liable to use similar language.*" [There is no getting over the "*similar language*," you know.] This assertion is not exactly complimentary to Mr. Hartman, whose head is perfectly clear, who knows what he is writing about, and who gives without any phrases and in intelligible language very valuable matter to his fellow-photographers, in the journals, whilst Mr. M. is not clear at all, and not at all master of his subject; for, if he were, he would not speak of "garbled extracts" in one passage and admit the similarity of language in *another*. Further, he would not have forgotten to say that his book, which cost him many years of labor and experiment, *cost* the buyer \$1.50—we bought one for that price from the Scovill Manufacturing Co.—and that the sum he names in his *defence* is the *reduced* price for which he is *trying* to sell it *now*. Where there is such forgetfulness, there should be nothing said of "base fabrications" and "misrepresentations."

If the book does not sell for \$1.50 *now*, it is not the fault of Mr. M., but it is the fault of the book.

And now, Mr. Editor, allow me to tell your readers not to buy a book of the size of an imperial card, containing about as much reading matter as a small love-letter, and with nothing whatever new at that, but to keep and read any good journal, and they will get about twelve times as much matter, on all *points*, for about one-third

the money. All things of interest and everything new will be found in the American journals—extracts from the English, and full translations of the best French, German, and Italian authors. If he should prefer it, let him buy the books that are compiled from these journals every year, which he will find very valuable, for a really moderate sum.

To photographers like Mr. Morgeneier I would say, write an occasional letter to your journal, full of good and new things, and *don't* make a "book" out of an article; and, since one *may* use the ideas of another and still improve upon them, do so, yet state whence you get them, and thereby "exercise"—to use Mr. M.'s language—a "comparative respect and unselfish preference for one another."

Very respectfully,

W. KURTZ.

THE PRESENT.

BY H. H. SNELLING.

THE present of Photography is full of promise, but it is yet very far from what it ought to be, still far below the steel engraving or the artist's pencil. Yet it possesses excellencies and beauties of its own that graver or pencil cannot reach.

The eye of the artist and man of taste has been so thoroughly schooled in the rules of Art, so wedded to these rules, and the mind so under the influence of the opinions of the "masters of art," that they cannot look upon or contemplate with complacency any means of picture production that is not brain-work, and the great defects in Photography at the present day, as in the past, are the result of want of brain-work, and while we notice steady advancement and improvement in the mechanical skill of photographic pictures, we can see little development of "artistic skill," which is so necessary to commend it to the favor of persons of taste of this generation.

But the "artistic taste" of the present day is not true to nature, and as in the moral world so in the world of art "truth must prevail," and the time will come when truthfulness in Photography will have the ascendancy over the artificial in drawings

and paintings. We hazard this opinion—although we have no doubt there are those who will sneer at it—because of the disagreeable sensations which have passed through our own mind when looking at paintings, by some of our best artists, of scenes familiar to us, beautiful in execution and faultless in skill, yet untruthful in detail—so much so as to require strong exercise of the imagination to reconcile them with the natural locality.

The idea, therefore, which we wish to convey, when we say that Photography requires more brain-work, is that the photographer should have all his observing faculties on the alert in the study of cause and effect, and in ascertaining the best means of making them subservient to the production of “artistic” pictures without the loss of photographic truthfulness—apparently a feat among the impossibilities, but sufficiently possible to work a revolution in the minds of men as to what constitutes *true* art.

This may be illustrated by an anecdote of Garrick. Among his fellow actors was a young man whom Garrick frequently asserted was no actor. One evening, over their cups, Garrick was rather severe upon him for his want of ability as an actor, until he at last observed that he looked grieved and crestfallen. The kind heart of Garrick told him that he had gone too far, and he instantly strove to soften his aspersions and console him, when the young actor burst into a hearty laugh, and replied, “Don’t say that I am no actor again.” Here was nature and art so closely assimilated as to deceive one of the finest dramatic critics of this age.

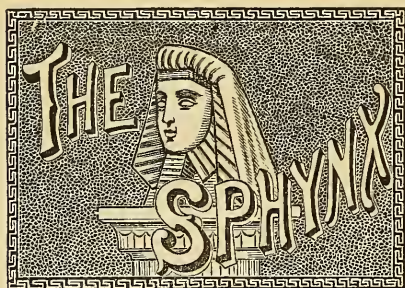
But here we have written nearly our “quantum,” and have not touched the subject contemplated when we commenced, so we can only make a beginning in this number.

To our mind “artistic photography” is best illustrated, so far as portraiture is concerned, by the pictures of Faris, who was, if not now, on Broadway, New York City, opposite Astor Place, and some views we have seen by A. Hesler, of Chicago, approach as near to it as any that have come under our eye in landscape. The view in

the September *Photographic World* we do not consider artistic, and as a photograph it is faulty in many particulars. It is too massive throughout, and has not sufficient delicacy in the lights and middle tints to relieve the eye of the disagreeable effects produced by the deep shadows. The reflections are too strong; in parts stronger than the substance. The decided perpendicular line which cuts the picture into two unequal parts is a gross defect, while the rock at the left is like the first attempt at charcoal drawing by a schoolboy, and we can only surmise the presence of water in the natural scene, for in the picture there is nothing like the “counterfeit presentment” of that element. Were there as much of the picture below the water line as above it, it would look as well upside down as right side up.

It may be said, “Ah! but it is true to nature.” This is a mistaken notion, for no matter how dense the shadows in nature, they are what is termed transparent, which they are not in this picture. In nature water is not lost to the eye by the reflection in it of objects above it. The picture is untrue to nature in this respect. When means are devised to obviate such defects another step onward will have been taken. Some of them are partially due to printing and to the surface upon which they are printed. The photographic skill in taking the negative exhibits the hand of an expert operator. Printing upon albumen paper reverses the “artist’s” method, who paints upon a dull, opaque surface, and puts on the varnish after the picture is finished. The right kind of size for paper for artistic photography has yet to be discovered. More anon.

PANORAMIC VIEW OF CHICAGO.—With characteristic energy, Mr. Robert Benecke, of St. Louis, sped to Chicago with his camera right after the fire, and has secured excellent views of the ruins, of stereoscopic and other sizes; examples of which he has kindly sent us, including a panoramic view of the burnt district. Nothing has brought the sad fate of Chicago to our mind so sensibly as these views.



Answers to Queries last month.

2. Because the gold is reduced into fine particles the bath turns purple. No harm is done, and no care need be taken to prevent it.—JULIE.

3. i. By careful development and exposure. Too strong a developer, over-exposure and strong reflected light all rob you of contrast.

ii. Over-exposure or too strong developer.

iii. Too strong a silver solution makes it "crawl" on your paper, and causes "tear-drops."

iv. Hard to answer briefly. It is sometimes prevented by making the hypo solution very strong at first, and then diluting it gradually by pouring water into it.—SPHYNX.

4. I doubt if there is. All such queries are only solved by research and experiment. Try it and let me know the result.—SPHYNX.

7. See *Mosaics*, 1872, out this month, and also Mr. Marshall's excellent formula given in vol. iii, *Philadelphia Photographer*.—GEORGE.

9. i. See answer to query 3.

ii. See Mr. Fennemore's article on "Collodion Positives," in *Philadelphia Photographer*, May, 1867, page 137.

QUESTIONS.

1. I have a half gallon negative bath that troubles me, by the formation of small crystals of minute size, in color like the finest slivers of glass, and perfectly transparent like glass. I have tried every means I know of to get rid of them, but without success. I have evaporated and fused, I have diluted with twice its bulk in water. I have tried citric acid and soda until I have removed the entire iodide, but still after a few days they will come back. I

have also tried to crystallize and then filter out by standing it in the sun for weeks, and have had to give it up. Perhaps some others of our profession are troubled in the same way, and an answer through the *Sphinx* might benefit many. Being a subscriber for both the *Photographer* and *World*, I make bold to apply to you, hoping to find a solution of the matter.—E. P. L.

P. S.—The bath works perfect otherwise.

2. Can you answer me the following queries: Once upon a time when I was just green enough for dark-room windows, I bought some chloride of lime for chloride of calcium. I thought that chloride of lime was another name for chloride of calcium. I put about 2 ounces of it into half a gallon of silver solution. It did not turn black, or seem to precipitate, but laid at the bottom as if it was in water. I got the prettiest effect at 40 grains, and the paper kept well for three or four days, and I believe it would have kept for weeks if I had tried it. Since then I never could get chloride of lime to work with my silver solution to give the same effects. Was it the lime, or the condition of the silver?—LIGHT GREEN.

3. I have been troubled all winter with the silver drying in drops on the paper, as if the paper were greasy. Alcohol is the only preventive, and that not certain. I tried nearly every brand of paper, and Pearl was the only one I could use. Is there a remedy, and what is the cause?

4. A collodion turns very dark color when made, and in a day or two turns again to a light orange. Cause?

At times the image does not show in the film until developed; at other times it shows very distinctly. Cause?

Want formula for collodion to give very dense negatives to be used with inferior light on a subject with little contrast?

Collodion to have fair keeping qualities?—Q. Z.

5. I am using diamond paper (tinted), which I like very well when I can get it to work, but in spite of every effort the silver will crawl, and cause what I suppose is termed tear-drops. Now I have read the remedies for that repeatedly, and acted accordingly, but without avail; my silver

solution is plain silver, slightly acid, with two ounces of alcohol to the quart, and I have reduced it in strength until it causes blistering, or in other words softens the albumen; still it persists in crawling. Now where is the trouble, and what is the remedy? Please inform me and oblige,

Yours, &c.

6. Can Sphynx tell me the cause of a white deposit running from the bottom of the plate, about one-half or an inch where it sets on the dipper? It will brush off when dry, but seems to penetrate through the film. It evidently comes from the dipper, but the cause I am unable to tell. We use ferro-type plates and rubber dipper.—A. S. A.

OUR PICTURE.

MEMBERS OF THE BERLIN SOCIETY FOR THE
ADVANCEMENT OF PHOTOGRAPHY.

IN the last National Exhibition, at Philadelphia, there was a frame containing pictures of several of the members of the Berlin Society for the Advancement of Photography, made by Mr. J. Grasshoff, Berlin, Prussia. It was afterwards presented to our friends of the German Photographic Society in New York. Our picture this month is a reduced copy from Mr. Grasshoff's originals, and we think it will be interesting and valued for various reasons.

Several years ago one of our dealers imported a lot of cartes from Messrs. Loescher & Petsch, Berlin, which they offered for sale as "studies" to photographers. They were not patronized very largely, and for a while only a few hundred were imported at a time. Presently their fame began to grow, and the demand was great for "Berlin cards." They were unlike, and superior in some respects, to any made in this country, and the heads were much larger than anything here. Through them Berlin work became popular and soon had many imitators, and we think we do not err when we say that to these Berlin cards is mainly due the great improvement which many have made in their work here during the last three years. We have heard photographers say, over and over again, that "those Berlin cards aroused my ambition and I worked

and worked until I could equal them. I am thankful that I ever saw them."

Soon after their introduction we secured Dr. Vogel as one of our regular staff of contributors, and since then there has been a fraternal feeling existing among German and American photographers, which, although it has not ripened into personal acquaintance, except in few cases, has been productive of more good than can be told. The German artists, we are free to confess, have on the average more real artistic *feeling* for their profession than we "to the manor born" have, and we care not how much that feeling is imbibed by our own rising generation of photographers. The more we have of such men as Kurtz, Scholten, Rocher, Merz, Benecke, as well as other good German co-workers, the better it will be for American photography.

Many thanks, then, to our good German brethren for what they have taught us. We are glad that they have at least one society of their own in New York, but we wish they would allow their American co-workers to come into their society, too, and let them rub against them. It would be mutually beneficial. They are familiar with many whose faces appear in this picture, but for the benefit of those who are not, we will give a short sketch of such as are most familiar to us.

First, in the left upper corner, we have a fair likeness of that whole-souled, earnest friend of photography, Dr. Herman Vogel. Many of us are familiar with his genial face. No one works harder for the advancement of our art than he, and few have as thoroughly practical a knowledge of it in all its degrees. Although a young man, he has been selected by his government to perform honorable duty on several occasions—at the Paris Exposition, in Arabia, Egypt, and Italy. He was the invited guest of our own National Association in 1870, and has since given us a most complete and practical handbook of the practice and art of photography. He has been President of the Berlin society for several years, each year being re-elected. He has been a professor in the Berlin Institute of Technology several years, and is editor of the *Photographische Mittheilungen*. May he live a long life of

usefulness and continue his letters to us, which have done so much towards fraternizing us with our craftsmen in Germany.

Next to Dr. Vogel, the names most familiar to us are those of Paul Loescher and Max Petsch. Their pictures we find in the lower row. They have a magnificent establishment in Berlin, and as many of us know, by their unequalled stereoscopic groups from life and by their work shown in our annual exhibitions, do most exquisite work. Mr. Petsch, as our readers know, served his country during the late war, substituting the needle gun for the camera, and we were thankful when he was returned safely. Our art cannot spare such as he. He has regained his vitality, and we soon expect to see some elegant things from him.

Now we come to the frank, honest, artistic face of Mr. Grasshoff himself; a photographer of only three or four years' standing, but one who has made rapid advancement, and who continually reaches higher and higher. We published one of his pictures recently, but he has improved so much since that we are negotiating with him for another. May it soon come. Mr. Grasshoff has also contributed some excellent articles to photographic literature, which have appeared in the *Photographic World*.

The name of Hans Hartman is also familiar to the readers of the *World*, made so by his excellent papers on retouching the negative, the importance of dress, &c. Mr. Hartman was the first secretary of the Berlin Society, and is an artist of rare talent, in the employ of Messrs. Loescher & Petsch, where he is the first negative retoucher. Dr. Vogel says of this picture, "that is indeed Hartman." He is also an excellent landscape painter. Mr. L. Prang, of Boston, has recently visited Berlin and purchased one of Mr. Hartman's moonlight pictures, to reproduce by chromo-lithography soon. Mr. Hartman is socially a jovial companion. Many times has he enlivened the Society by his amusing poetry, and his quaint questions to Dr. Vogel concerning America we have already published. Our friends of the New York Society are familiar with Mr. Hartman's propensities in this line, we have no doubt. Are they not?

Herr Prämm is the vice-president of the

Society. We have never had the pleasure of seeing any of his work in this country, but as he was acting president during Dr. Vogel's stay in America, he is no doubt eminent in the practice of his art.

Dr. Zencker is an eminent optician and was a member of the Aden solar eclipse expedition of 1868. He is also well known in photography by his book on photography in colors.

Dr. Jacobsen is working, like Dr. Zencker, in colors for photography, with his brother. He manufactures the excellent aniline water colors for photographers, which surpass in brilliancy all other colors for this purpose. Dr. Jacobsen is also one of the first scientific humorists of Germany. His principles of chemical analysis, written in verse, is a charming book.

Herr Junghaus is a chemist, like Dr. Jacobsen, and one of the most active members of the Society. In all chemical questions we find his name in all discussions of the Society. He was a long time the chief of the well-known Beyrich chemical laboratory, now in the hands of the successors, Bergmann & Freyschmidt.

Romain Talbot shows us an earnest-looking face, like a man of truth and much experience. He was born in Germany, but has worked twenty years for photography in Paris. He was driven out of Paris with 80,000 other Germans, during the late war, by the Frenchmen. He is now in Berlin, and we hope he will there work for photography still, a long time. He has long been a valued correspondent of ours.

Dr. Schultz-Sellack is one of the youngest members of the Society and in photography, but already estimated by his valued researches in the principles of photography, which we have given to our readers. He is now in America, in the gallery of Mr. Kurtz, and his contributions to our pages are of great value.

We cannot give all the details of this eminent Society. We should mention still Burchardt brothers, the most excellent photo-lithographers of Berlin; Gilli, the eminent royal sculptor, not only skilful in marble, but interested in the progress of all other arts and sciences; Scamoni, the cele-

brated photo-lithographer of the imperial printing office in Petersburg; Schwier and Quidde, the members of the photographic detachment of the staff during the French war, and Lecoq, the treasurer of the Society, who was a long time in China and very often in America; Dr. Friedländer and d'Henreuse, working in heliography, Milner, the owner of the well-known Schauer establishment, and Morowsky, the second secretary of the Society. We regret that our friend Mr. Ernst Milster is not among them. The tableau had to be sent off to America, to reach the Exhibition, be-

fore he could get time for visiting Grasshoff's studio.

There are others with whose names and fame we are not familiar. They all belong to our fraternity, and we are interested in seeing their faces. The prints and negatives were made by Mr. William H. Rhoads, of this city, on the celebrated German albumen paper of Messrs. Trapp & Mench. Long may our intercourse with our co-laborers in Germany be as pleasant and beneficial as it is now. Our readers will not forget the cordial address they sent us last year. We shall never forget them.

Editor's Table.

THE *Photographic World* for October contains *nine* beautiful photographs from statuary, by Mr. J. H. Kent; something altogether different in subject and lighting from what we have before published; also the following articles:

Photography Abroad; Notes In and Out of the Studio; Artistic Lighting reduced to a System; Method of Enamelling Cartes; Lecturettes on Modern Chemistry;* Cyanide as a Cure for Consumption; Preservation of Sensitized Paper; New Use for Ferrotypes Plates; A Good Redeveloper; Western Dodges; Position and Composition; Story of the Pigeon Post in France; Photography for Boys; Excursion of the Hypo Club (Full and Capital Hints for Outdoor Workers); Proceedings of the Hypo Club; Splashes of Silver; Photographic Geoplastic; On the Photographing of Oil Paintings; All the World Over; Table Talk, and Editor's Table. Altogether a good number. 50 cents.

CHICAGO.—Alas! for the fate of our fraternity there. We trust that the call made for their aid will meet with a prompt response. We publish the proceedings of the last meeting of the Chicago Photographic Association. Mr. Smith's studio, there described, was not burned, we believe, but his paper read was destroyed, as Mr. Douglass tells us in his letter, as well as Mr. Sawyer's studio, where the meeting was held and to which the Association adjourned.

* We are informed by Mr. J. Trail Taylor, editor *British Journal of Photography*, and Mr. Henry Greenwood, publisher, that these lecturettes are not written by Mr. Taylor. Who *did* write them we are not told. It matters not. They are good.—Ed.

MR. ALVAH A. PEARSALL, who has the general supervision of Brady's gallery, Broadway and Tenth Street, New York, has sent us some admirable portraits of a lady, which are splendidly and artistically posed and lighted, as well as exquisite in chemical effect. If the negatives are retouched at all, there has been but little done to them; none of the delicate middle tints of the fine face being lost. Mr. Pearsall is one of the *present generation* artists, fully up in all modern appliances, and is doing splendid work. His assistant is Mr. John Montgomery, another rising young photographer, who manipulates in the dark-room, Mr. Pearsall making the sittings. So pleased were we with the examples sent that we have secured the negatives to embellish the *World* with, for November or December. All success to such pushing, growing young photographers. A paper by Mr. Pearsall will appear in our next; also one in *Mosaics*.

THANKS to Mr. James Cremer, for several beautiful lantern slides of views in our Fairmount Park, including a fine one of the new Lincoln Monument. Mr. Cremer is building up quite a business in lantern transparencies. Mr. Cremer is also publishing from Mr. Carbutt's negatives a fine series of stereo views of Chicago *as it was*.

BURNED OUT.—Mr. Max Saettler, St. Louis, we regret to hear, was burned out Sunday, October 8, at the same time of the Chicago fire. Mr. Saettler loses about \$8000, having no insurance. He was waiting for the Photo. Ins. Co.

DEATH.—Mr. W. P. Estell, of the firm of Maxwell & Estell, photographers, Richmond, Ind., died Friday, October 13. We knew him personally. He was a man of integrity, of kind and genial manners, and an excellent workman.

THE PHOTOGRAPHER TO HIS PATRONS.—See the display advertisement of it in October *Philadelphia Photographer* and *World*. Mr. Thomas Walter, of Norfolk, Va., says: "It is an excellent little work and I would not be without it; also an excellent advertising medium." Send for samples and read it. Samples gratis.

MR. A. T. RUTHRAUFF (late of Ruthrauff & Foss) has opened a factory at No. 315 Montgomery Street, San Francisco, for the production of passepartouts, displayers, and oval and square frames. He also deals in mouldings, chromos, &c. Please to patronize him.

MESSRS. CHARLES T. WHITE & Co., New York, have sent us their monthly price-list, and report a rise in iodine and all articles made from it.

WELL WATCHED.—On Tuesday, October 17, was the twenty-fifth anniversary of the entrance of President Bogardus into the photographic business. In the afternoon he was waited upon by his several employees and presented with a magnificent gold watch. It was a perfect surprise to him and he could hardly realize it. An ice cream entertainment followed amid much jollification and speeches, the whole affair being one which all present will be happy to remember for a long time. Nothing can be more gratifying to an employer than to have the good will of his assistants, and Mr. Bogardus has that in full measure. We happened in after the watch had been presented, and the refreshments were all gone.

"BEWARE!"—We believe that the "Company" alluded to on page 334 of our last issue is an undoubted humbug. Messrs. W. H. Allen & Bro., Detroit, state that they know of no such company there, and Mr. W. A. Armstrong, of Saginaw, Mich., says he is the only photographer there, and never heard of the "National Photographic Company." Again we say, *beware!*

PHOTOGRAPHIC REVIEW OF MEDICINE AND SURGERY.—A bi-monthly illustration of interesting cases, accompanied by notes. Edited by Drs. F. F. Maury and L. A. Duhring. Photographs by Mr. John L. Gihon. J. B. Lippincott & Co., publishers, Philadelphia, Pa. This is one of the most valuable works photography has accomplished, and must be prized very highly by

every surgeon. There are four photographs in each issue, making twenty-four in all in this volume. Certainly the bringing together of such rare and interesting cases in surgical practice as are here obtainable is an excellent idea, and photography has proven to be a most efficient helper. We are glad to see it used in this way, for the distribution of such valuable works enables surgeons to understand disease more easily, and thus human suffering is prevented.

Mr. Gihon has done his work so faithfully and well that one could not wish for a better helper than his pictures, to study the interesting cases displayed, except the subjects themselves. We congratulate him on his success in dealing with such poor sufferers as his subjects are, so patiently.

THE SENSITIZED PAPER COMPANY, Portsmouth, O., have sent us some excellent prints, by Mr. Rombach, of Cincinnati, made on their ready sensitized paper, and used by him according to the formula he published in our pages a short time ago. We have tried the paper with success.

MR. G. L. CROSBY, Hannibal, Mo., has favored us with a large view of the Hannibal Bridge, across the Mississippi, at that city. It is capitally done. There is a set of five views, which he sells for \$5.25.

MR. C. A. KIMBALL, Concord, N. H., has purchased back the interest of Mr. A. F. Clough, his late partner, and Mr. Clough has gone to Springfield, Mass. Mr. Kimball sends us a charming stereograph, called "Lost in the Woods," representing a little nut-gatherer, tired and worn, barefooted and asleep in the woods. He also sends us a series of his winter views of the summit of Mount Washington, on enlarged mounts, which improves some of them.

MESSRS. MOYSTON & Bro., Memphis, Tenn., have sent us some examples of their work, which are very refreshing to see. Mr. W. H. Moyston has been a regular attendant upon the National Photographic Exhibitions since their inauguration, and his work shows him to be a most careful student, and one who steadily improves. His work is full of delicacy and softness, and must please greatly more than some of the harsh, hard work still made in some quarters. He is no doubt appreciated.

SOME very excellent cabinet and carte portraits have been sent us by Mr. A. Simpson, Buffalo, New York. Few photographers work with more taste and *feeling* than he. His effects of light are beautiful.



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T H E

Philadelphia Photographer.

Vol. VIII.

DECEMBER, 1871.

No. 96.

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EIGHT YEARS.

WE cannot wait until we are ten years old to give place to a few words which we want to say.

It was just eight years ago that the photographic art was convulsed (of course!) by the appearance of the *Philadelphia Photographer*. Its birth was almost premature. We were walking along in our daily rut, within the shades of a photographic gallery in this city, with the seed in our hand, wishing to find some healthful soil in which to plant it. Almost accidentally it dropped from our grasp, and in December, 1863, a little leaflet sprang up, which surprised none more than it did its accidental progenitors, as a New Year excitement for the face-makers of America and the world. Since then it has grown vigorously—stronger and bulkier in body, and multiplying its branches and widening its influence as time progressed, until now, it feels that there is a place for it, and that it is able to advance the interests of the wonderful art it advocates, including those of all who worship at the photographic shrine.

Its life has not been a smooth one altogether, and perhaps none of its contemporaries have received so many hacks at their roots, bent upon destroying their lives, as it has received. A New York contemporary

maligned it monthly for two long years; "Old Bromide" tempted it to taste of his fruit until "forbearance ceased to be a virtue," and it had to take up the lash against him; the process seller and the merchant-man have tried time and again to climb up it and break down its branches; because it waved the signal of warning to its friends who were likely to be imposed upon, it was dug up root and branch for a time, and imprisoned for libel; because it dared to cool the enthusiasm of "waste swindlers," its bark has been scarred, its limbs torn, and great pieces of its roots severed, but it still lives, and grows, and thrives, and its branches still shoot forth and wave with renewed vigor. In the eight years of its life, it has seen great changes made in photography, which have—some of them—been so gradual, that one cannot realize them until he turns over the pages of its back numbers. What great leaps have been made, and what wondrous fields of usefulness have been opened in the eight years of the life of the *Philadelphia Photographer*!

There are many who kindly bore with the imperfections of its early life, who yet treat it with tenderness and give it their support, and now we desire to say that our motto still is, "*Forward, to Perfection.*"

We are now in better shape than ever before to independently and fearlessly further the interests of our patrons.

Our tree has so grown, we believe, as to enable us soon to live on its fruits, and we have cut loose from our other business relations, which were only held to help support this work, in order to give it the attention which it demanded.

We are glad that this is so, and we hope the result will be increased usefulness to you. Our great single aim is to be useful to the *working photographer*. We therefore belong to that class of individuals, and want to be used by them. Ask us freely what you want to know. Give us your ideas on all practical topics, and strive *with* us to further the growth of our art. We sincerely desire your prosperity, and either through our pages or by private letter, if we can serve you, here we are, ready to do so. Command us. We are grateful for the support and sympathy we have had in our work. When we think of it, our mind runs back to the time when our whole edition could be printed, bound, and directed in twenty-four hours, for then we carried our whole circulation to the post-office under one arm. Soon a lad and a small wheelbarrow were needed to take our edition to the mail; then a hand-car was required, and lo, now, the thousands that are demanded monthly compel the services of a stout horse and car, with a man to oversee all.

It is this growth that enables us to devote our time to the work. Shall we continue to be supported in our efforts to aid you? Now is the season of trembling with us. It is the time of leave-taking with the most of our subscribers, for their subscriptions expire with this number. Shall we grasp hands with you during the New Year? Will you bring some new comers along to help in the work? All this you can do, and if you desire that an independent magazine should be sustained and continued, ought it not to be done?

As usual, our subscribers will find order forms with this number. Please return them early to us, well filled. Our programme for the new year please find on the third page of the cover.

Also please read our offer of premiums to those who will aid us in increasing our circulation.

THINGS WORTH KNOWING.

BY W. J. BAKER.

The Gas Tar Dipping Bath—Retouching the Negative—The National Photographic Association Convention.

THE following communications seem to be of general interest. They explain themselves.

DEAR SIR:

IN the *Philadelphia Photographer* for October, some remarks under your hand concerning Black's method of using the silver bath, and also the bath-holder which he mentioned in the Philadelphia Convention, calls for an explanation.

Mr. Black professes to be using, and to have used for some months, a bath for dipping, down to twelve or fifteen grains, with an immense amount of gain. To use it up to the usual strength is not, I believe, found to be satisfactory. That was the method you tried, I believe it was stated.* Several photographers in this vicinity are using successfully this form.

It was undoubtedly Mr. Black's invention, but the bath-holder is claimed as emanating from this establishment, and if you should give it a trial you would find it very useful, cheap, and every way better than a heavy glass bath.

This is in general use in the neighborhood of Boston. A box of such shape as usual for dipping baths is first made, filled with hot coal tar, in which is mixed an ounce of gutta percha to two or three pounds of coal tar; it can be obtained of any roofer.

These holders we have had in use entirely over two years; and no less than four times I have passed through Buffalo in that time, with two of them filled and ready to use at my journey's end. No danger need be apprehended from leaking if the box is thoroughly made. We paint them on the outside with black varnish. You will find them to repel the silver solution, so in cleaning them out they are in a better condition even than a glass bath, but at the same time there is an action on the silver solution from the tar,

* Mr. Warren is mistaken. I tried the weak bath with much acid, just as recommended by Mr. Black, but had no success.—W. J. B.

which gives it a yellow tinge, but does not injure its pure action on the plates. To prevent any fear of accidents in leakage, we protect ourselves by having a box built with India-rubber cloth beneath the bath-holder, and in which it sits, but have never found it to be wet.

Should be glad to hear from you should you try the holder, and remain

Very truly,

GEORGE K. WARREN.

Some farther inquiries brought this second letter.

DEAR SIR:

Yours of the 15th received this morning. Pure gutta percha gum is the article mentioned. The use is to hold the tar from running, but it is not absolutely necessary to use it. I use the best *pine* wood—soft, well-seasoned, free from knots entirely. First put together the two ends, bottom and one side with screws, carefully and strong, then lay on a coat of the warm solution with a brush, as also on the other side, and while warm screw that up tightly, flowing afterwards the inside of the box. A little experience will soon show you how to manage better than I can explain.

Concerning publication, I don't care.

I am very truly,

G. K. WARREN.

CAMBRIDGEPORT, MASS., Oct. 20, 1871.

At the Philadelphia Convention last June, information on the subject of pencilling negatives was much sought. The following list of articles on the subject, may in its extent, fulness, and value of the articles enumerated, surprise those who do *not* read their journals attentively. I believe that there is nothing known on the subject which is not here laid down. The list was prepared by an assistant, and I have had no opportunity to verify it. It is possible that some things have been left out, and there may be mistakes in pages, &c. It commences at the year 1868, prior to which date no attention to the subject seems to have been given in this country, though we are pretty certain that it was practiced at even an earlier time in a few galleries in Europe.

"Philadelphia Photographer," 1868: pages 234, 340.

"Philadelphia Photographer," 1869: pages 29, 101, 133, 157, 195, 260, 384, 402.

"Philadelphia Photographer," 1870: pages 83, 125, 126, 165, 329, 358, 372, 381, 370, 416, 418.

"Philadelphia Photographer," 1871: pages 55, 298.

"Photographie World," 1871: pages 122, 143, 163.

"Photographic Bulletin," 1871: pages 72, 34.

"Photographer's Friend," 1871: page 20.

"Photographic Mosaics," 1867: page 49.

"Year-Book of Photography," 1870: page 73.

"Year-Book of Photography," 1871: pages 67, 69, 72.

"British Journal and Photographic Almanac," 1871: pages 86, 134, 138.

Here are thirty-seven different essays on the subject, accessible to any and all, yet it was asked at the Convention "How to retouch negatives?" Evidently the mistake was in supposing that a process, and not practice, would give the result.

Some have spoken of a feeling of disappointment in connection with the last Convention, that not much was accomplished, but little new brought out, slow progress marked, and a low standard characterized the attainments and discussions of those present, which were by one characterized as "skim-milk." Certainly room is left for advancement; but that the National Photographic Association is in its day and generation, as wise as most associations, can be inferred by comparison.

The American Institute of Homœopathy held its annual meeting for 1871 in Philadelphia, simultaneously with ours. And what did these "learned men" do, and leave undone? One whole morning session was occupied in listening to an elaborate paper, read by a member, on the provings of skim-milk 200^x. Now what is skim-milk 200^x? It is a considerably weaker article than the Philadelphia, or even the New York milkmen usually distribute. An ounce of skim-milk in ten ounces of water would be 1^x. An ounce of this mixture, well mixed in another ten ounces of water, is 2^x; and 200^x will contain a portion of the original ounce of skim-milk, represented by a fraction with 1 for a numerator, and 1,

with two hundred ciphers annexed, for the denominator; thus, 1000000000000000000000000. No! we can't do it; here are only twenty ciphers, and there is no space or patience to add the remaining inanities. It is something like the vacuum cure. (Conundrum! Do you give it up?) There is *nothing* in it. Yet this M.D. went on showing that skim-milk, with these noughts added, would produce long trains of symptoms in healthy persons. What the symptoms may be we don't know, possibly a sensation of fulness in the stomach after an attempt to swallow the original ounce of milk in its 200⁺ form; or perhaps the hair was noticed to be shorter after being cut; at any rate don't be afraid of "skim-milk," pure and undiluted. So many people drink that, without finding provings (unless the milk bill is proof of consumption), that any abnormal symptoms may be safely assumed to come from the nothings that are annexed, and which were fed out to the American Institute of Homœopathy as an intellectual treat, and a potent addition to their arcana.

We are thankful that no such slush was hove unto our members; and we feel as though we were worthy to chant that sensible and time-honored prayer, "We thank thee, Lord, that we are not as other men are," only—there are the Chicago poor, and half of our goods, right in the way of the going on. Let us continue with our Convention milk, if it is skim; it evidently has not as much water in it as that some people swallow.

BUFFALO, N. Y.

PHOTOGRAPHIC DIALOGUES.

BY ELBERT ANDERSON,

Operator Kurtz's Gallery, 872 Broadway, N. Y.

Anderson. AH! Marshall, is that you? Come in, how goes it?

Marshall. I'm easy; glad me to introduce to you my operator, Oliver Spottzenstreix.

Spotts. Glad to know you, sir.

M. Spotty and I have had some little differences in regard to copying, and I have referred him to you, so I'll just leave you two fellers to gab, whilst I—

A. Just step down stairs and take a little

sherry and bitters; tell them to charge it to me; after that I invite you two gentlemen to come and take some oysters with me. How's that?

M. That's hunky. In the meantime set this poor misguided youth aright. He's got some crazy notions about copying.

A. Now, Mr. Spottzenstreix, what is the trouble?

S. Every now and then, Marshall gives me some pictures to copy, but he don't approve of my style of copying.

A. How so?

S. I maintain that every picture to be copied, may very properly be placed upside down, and copied in the sun, don't you?

A. Most emphatically no. I do not.

S. Well, I don't know about that, I suppose you ought to know best. Why, Marshall even goes so far as to try to stuff me up, that *certain pictures ought to be copied, not only upright, but in the light they were drawn or painted in*. Did you ever hear of such nonsense?

A. I wish you had a little more of such "nonsense" in *your* head; Mr. Marshall is perfectly correct. There are certain kinds of pictures that cannot properly be copied in any other light, save the one they were executed in.

S. Well, that's news to me. Will you please to explain this?

A. Certainly. Here is a picture of a young lady, a vignette, in low neck. As you see, it is done in water colors *on exceedingly rough drawing paper*.

S. Just so.

A. I hold this up, then, in the light in which it was executed. Now by examination you will notice that the roughness of the paper is very apparent all over the drawing, except on the face and neck, which are very smooth and soft.

S. You are right. What makes the face and neck so much smoother than the rest of the paper?

A. This is only apparent, not so in reality, as you may ascertain by passing your finger over the surface of the paper.

S. That's so, but it looks smoother, don't it?

A. The roughness is the more apparent according to the elevations and depres-

sions in the paper, of course. When the paper is held so that the light falls very aslant upon its surface, the roughness is exaggerated, as each of these little elevations casts a shadow. When I hold the picture in such position, that the light falls upon it, these shadows disappear, and the paper appears to be smoother.

S. True. Now you say the picture was executed in *this* light; how then do you account for the paper being so smooth on the face and neck, and so rough elsewhere?

A. Ah! now we are getting at it. *The very shadows in the paper are taken into account when the picture is executed, and go to form part of the work in the drawing.*

S. The devil you say!

A. Here's the *proof* before you. You may feel the face just as rough as the rest of the paper. Now suppose we turn the picture upside down to copy it, in the same light—there! look at it.

S. Well, well, well. I've nothing more to say. She looks as if she had an attack of small-pox in its most malignant form. So, so, the old man is right after all.

A. Indeed he is. When we come to apply this to painting on porcelain you will perceive another extraordinary effect. See, as I hold this porcelain picture in the light it was painted, it looks very smooth and beautiful. Now I will reverse it. See there!

S. Thunder! We see all the brush-marks, especially where the paint is raised, or thick. I wouldn't have thunk it.

A. One of the greatest of all difficulties is when you come to copy oil paintings. For here the artist not only avails himself of the roughness of the canvas, *but uses the shadows cast by the paint itself.* And that's not all. I'll place this oil painting *there*, and do you come over here, and look at it. How do you like it?

S. I'm blessed if I can see it at all. There appears to be a glaze all over it.

A. That is what we call the "sheen," and the glossy paint acts as a mirror, and reflects the light from the skylight. Now if we turn this upside down, the coarseness of the canvas is painfully apparent, but placed in the light it was painted, we lose sight of the canvas again. You cannot even copy *this* picture "in its own light," so to speak, on

account of this sheen; but by raising it pretty high, and tipping the top forward, the sheen disappears.

S. I'm very much obliged to you. I guess I must take in my horns on the copying question. What *can* I copy in the sun?

A. As a general rule NOTHING. For photographs, first wax and press them flat. For pencil drawings, engravings, &c., on a smooth surface—especially if not to be enlarged—nothing is better than a soft *diffused* light. If you have a small card, ambrotype, or a daguerreotype to be enlarged to life-size, you *must* put such in a strong sunlight; there is no other way, and with this exception, *never* attempt to copy in the sun and expect to get a good copy, than which, nothing can be more erroneous. Be careful in your selection of the kind of lens you require.

S. I will be happy to see you again on that subject. Have you any particular formula for copying collodion?

A. No. I use the same that I do for portraits; it may be a trifle older perhaps.

S. I never can get intensity enough on engravings, wood-cuts, printed matter, &c. In the proof, instead of the whites remaining *white*, they were all more or less "tinted;" the negative is never opaque enough.

A. I am afraid that is not so much the fault of the collodion, as it is the man who uses it. Do you modify your developer sufficiently?

S. No, but I strengthened up pretty well with sulphuret of potassium. What do you mean by modifying the developer?

A. In copying line engravings, wood-cuts, photographs, printed matter, &c., give *plenty of time*, in a bright diffused light.

S. Please be a little more explicit.

A. Suppose with your ordinary developer, one minute is time enough, then give *three* minutes, and weaken your developer accordingly; and the instant the picture is all out, wash it off as quickly as possible.

S. Why this haste?

A. To prevent any possibility of the fine lines "clogging." Now strengthen with pyro in the ordinary way, fix, and *wash thoroughly*. Next, into six or eight ounces of water pour an ounce of a saturated solution of bichloride of mercury; flow this on

and off the plate, gradually increasing the strength of the solution. At first the negative commences to darken, and then to turn of a grayish-white color; when at its whitest wash thoroughly, and flow on and off a very weak solution of aqua ammonia in water, gradually increasing the strength; in a short time the negative will blacken, and will finally become absolutely opaque. Hollah! here's Marshall. Come, let's go and get our oysters.

M. Well, have you convinced Spotty of his error?

S. Yes, sir, indeed he has. I take it all back.

A. Now then, gents, speak out.

M. I'll take mine fried, and some celery with a glass of sherry.

S. Give me saddle rocks on the half-shell with a bottle of Muir's Pale.

A. Waiter, you hear these orders. Ventilate these fluids and viands. What's that, Marshall?

M. I have here a copy of the *Photographic News*, October 13th, 1871. May I read you something.

A. Sir, you may.

M. This is from page 489, and entitled "The Employment of Albumen as a Substratum for Collodion Plates," by Dr. P. Leisegang. Now listen. "Some years ago a statement was made by Mr. C. W. Hull, in the Photographic Section of the American Institute, that a substratum of albumen applied to negatives decreased by about one-half the sensitiveness of the film. The statement was at that time emphatically denied, but no one seems to have taken the trouble to obtain experimental proof of the matter, either one way or the other" . . . "and supports his affirmation by such striking examples that there would seem no longer any reason for doubting his statement." These gentlemen further claim, the albumen affects the intensity of wet and dry plates differently. Will you allow me to read further?

A. Assuredly.

M. Now listen. "To settle the matter beyond dispute, Mr. Hull prepared the next evening six plates in the following manner: Two with an albumen substratum, and four with an albumen margin only; on the two

latter being written with a piece of wood dipped in albumen, his name in large bold characters. The following day the plates were exposed one after the other in the camera without the latter being in any way tampered with, and the result was, that the albumen-coated plates required exactly double the amount of exposure that was necessary for the proper production of an image on the others. Those upon which Mr. Hull had written his name were vigorous and detailed enough, excepting in those portions where the albumen characters were written, the image being here exceedingly thin and weak. The behavior of the albumen in wet plates is very singular; by increasing the exposure half as long again as usual, much more vigor was obtained, and where the name was written in albumen, the image was much more intense than elsewhere." [It appears further on, that Mr. Leisegang repeats Mr. Hull's experiments, and both of these gentlemen appear to be satisfied of the correctness of the statement. Finally, we have the following sentence]: "Repetition of the experiment gave like results, and, therefore it seems to me to be beyond dispute that wet plates sacrifice much of their sensitiveness to the albumen. *How are we to explain, however, the fact that this unfavorable influence of the albumen has so long escaped the attention of portrait photographers?*" Now, Anderson, we'll hear from you.

A. Gentlemen, I rise to a point of order.

S. Bully! order me another glass of ale.

M. Come, Spotty, quit. Now then Anderson.

A. I quote: "How are we to explain, however, the fact that this unfavorable influence of the albumen has so long escaped the attention of portrait photographers?" The explanation is simple enough. I have no hesitation in asserting most emphatically that these gentlemen are laboring under the most complete delusion imaginable. The substratum of albumen in portrait photography has no effect whatever on the length of exposure, on the intensity of the negative, nor on the negative bath; that is all sheer bosh.

Mr. Leisegang says: "No one seems to have taken the trouble to obtain by experi-

ment, the proof of the matter either one way or the other." Mr. Leisegang is much, very much mistaken. I have made numerous experiments before most competent witnesses, and have established beyond all cavil the proof of my own assertion. I coated *half* of the plates only with albumen, and exposed on various subjects, living and dead. The development was watched with the most intense interest and attention, and in no one instance could we detect, by the trifle of a second, the least difference in time; by the close scrutiny of the microscope the least difference in intensity.

S. Well, that's a *knocker*.

A. While on this subject, I read from Dr. Vogel's correspondence of the November number of *Philadelphia Photographer*, page 362. Waiter, bring us some more sherry.

"I will here refer to a kind of fault in the negatives—I mean those produced by albumenizing. We are indebted to America for the albumen process, as a substitute for tedious plate cleaning. It has been generally adopted here partially with good success, but over and over again we hear of defects, and these happen even to the cleanest and most careful operators. In view of these facts it surprises me that I have never read in American papers of similar complaints, and it almost seems as if the American photographer had not to contend with them. I leave it to your readers to answer if this is so."

No, my dear Dr. Vogel [we drink your health standing] it is *not* so. I have used albumenized plates during all my practice, and have never had the slightest trouble. No spots nor honeycomb-cells. It renders the plate absolutely clean; does not in the least interfere with the sensitiveness nor the intensity, and has never had any perceptible effect on my negative bath; the film is absolutely insured against slipping and splitting; to say nothing of the tedious elbow labor saved.

Gentlemen, the meeting stands adjourned.

Photographic Mosaics for 1872, is now ready. It contains only articles prepared expressly for its pages. Cloth cover, \$1. Paper, 50 cents.

"OUR PICTURE."

BY GEORGE B. AYRES.

I AM delighted to find in the October number of our favorite journal, that there has been so pleasantly anticipated a suggestion which I have often mentioned among my brethren, and which ere this I had intended, Mr. Editor, submitting to you. It is this: that, inasmuch as our business is mostly concerned in *Portraiture*, it would be highly beneficial from time to time to give some good specimens of that class of work in the *Photographer*. Thus far every one will, I believe, cheerfully acknowledge that you have given us a sufficient and delightful variety of other pictorial subjects, embracing many very fine photographic specimens.

With regard to *portraiture*, however, we have not had until now, anything concerning which *we* can feel ourselves competent to judge, appreciate, and enjoy. True, Kurtz and Landy have given us gems of old men, and other meritorious brethren have contributed younger heads with admirable skill.

But *who are* all these pictured people? The photographs are given for our edification, but we don't know who they are. We can, of course, admire, or, perhaps, be instructed by the posing and lighting, or by the manipulatory skill and chemical effect; but how shall we judge whether those processes have been judiciously applied in the particular case, and whether the final result is a *good portrait*? Every photographer knows, that no matter how perfect a *photograph* may be, it is not necessarily an equally perfect *likeness*.

Now it is self-evident that complete satisfaction can only be attained when the *subject* of the portrait-specimen is *known* to us; and hence you may easily understand the increased pleasure when your subscribers opened the October number and were so unexpectedly confronted with the genial face of our courteous President. If, as I hope, you have concluded to furnish similar illustrations hereafter, I think all will unite now in complimenting your judgment for the *first* selection.

Beyond doubt every member of the

National Photographic Association wanted, and will be pleased to get our worthy President's photograph. Every one too will exercise his critical abilities in regard to its *correctness as a likeness*—which they never did with previous illustrations. But *we all know* "father Abraham," and *that* makes the difference! For my own part, it is admirable; and just here I cannot forbear reference to the judicious manner in which it is retouched. See how completely every undulation of nature's modelling is kept inviolate; how thoroughly the work is done, and yet how entirely devoid of the effect of wax or marble! The *photographic* tone and texture is there still.

The beginning having been made, let us have *more* PORTRAITS. There is a galaxy of heads which the whole profession waits for, and will cordially join me in calling out "Next!" We want the magnificent head of Professor Morse; that group of venerable pioneers, our "old masters," which adorned the Academy's stage at our reunion last June; Professor Towler, Salomon, Dr. Vogel, G. Wharton Simpson, and others—not forgetting the indefatigable gentleman whose familiar initials are "E. L. W." We should also have something *in memoriam* of Daguerre and Niepce.

I am sure that my brethren in general will second my motion, and so I take my seat.

THE JOURNAL PICTURES.

BY H. H. SNELLING.

THE fact that periodicals, like the *Philadelphia Photographer* and *Photographic World*, can be illustrated by such fine photographs, in itself shows a decided advancement in the art. In criticizing them, I do so without knowing the producer of the negative, or the printer of the positives, not as yet having read the letter-press articles concerning them, in the numbers containing them, save the biography of Mr. Bogardus. Therefore I shall not justly be considered partial, and, if thought severe in some instances, I trust it will not create heart-burnings, but be received as the result of a desire to benefit both the art and the artist.

The portrait of Mr. Bogardus in the October *Photographer*, is a fine specimen of the photographic art. The lights and shades are beautifully blended and graduated; the outlines well rounded, void of the offensive "sharpness" so much prized by photographers who think they know a good picture when they make it, and yet not disappearing *almost invisibly* into the background, an error to which some celebrated portrait painters are given, and who should be taught a good lesson in truthful art by such photographs as this portrait of Mr. Bogardus. A little more light upon the curtain behind the left arm, so as to bring out the folds, and not produce the effect of a deep cavity or dark recess, would have been an improvement. The photographic and artistic effect of the head is fine, if we except insufficient clearness of the eyes. As a likeness I think I have seen better; it does not, to my mind, do Mr. Bogardus justice. The features are too rigid, and the sternness of the mouth is not characteristic of the man. It may be intended to mark decision, but it does not represent that quality, while it produces a false impression of the nose. The arms, also, are a little stiff, but the general pose is good.

The copies of statuary in the October *World* are not good representatives of the present state of photography in that line of work, but would have been called very good fifteen years ago. The lights and shades are badly managed.

I have seen better photographs of Kenilworth Castle than the one in your September *Photographer*.

"Just as I Am," in the August *World*, is a fine photographic copy; but as its artistic merits and demerits are the painter's, I shall say nothing about them, as it would be invidious to make the photographer responsible for them.

The "Last of the Queues," in the August *Photographer*, is only passable as a photograph, and artistically. One eye is entirely obliterated, as if the subject had received a "clubbing" before sitting, and the other is without expression. The outline of the drapery is too "sharp." There is a softness, however, in the tone of the picture that is commendable.

The *World* picture for July should not have been given below the waist. It is well managed as to position, and may be considered a good specimen of photographic portraiture, although the deep shadow of the hair is too intense, and the eyes want a little more light in them. The effect of light and shade is pleasing, and the faults in detail may be more the result of a defective camera than of the photographer's skill. He, perhaps, wished to produce a similar effect to that of the picture in your July *Photographer*, an effect truly artistic, according to the present acceptance of the term, and, so far as the face is concerned, beautiful; but the back of the head is not true to nature; the style, in mingling the background with the figure in an almost indistinct mass, is one of those meaningless vagaries which have warped the taste and judgment of artists and art critics.

The photographer who executed the children's portraits in the May *Photographer* and June *World* is a man of decided ability. I judge the same artist made the four, and he exhibits excellent taste in posing; but he fails, where nearly all photographers fail, in the eye. I should, perhaps, say that the printer is here at fault, could I see any indications in other parts of the pictures to warrant such an assertion. I have seldom seen photographs that reproduced the character as well as the "personale" so perfectly; and if the eyes were as expressive and animated as the other features, they would be almost perfect photographs. The lights and shades are beautifully harmonious and soft; and by referring to these pictures, if all in other copies of your journals are equally well printed with these before me, photographers will obtain an idea of what I mean by transparent shadows. The details, except the eyes, are well brought out; the hair is finely represented, and the fabric of the drapery is readily perceptible.

The June *Photographer* contains another fine specimen of photographic art, although the high-lights are a little chalky, the outline of the shoulder too "sharp," and the deep shadows of the drapery too dense and opaque. Still the "*tout ensemble*" is most excellent.

INSTANTANEOUS PORTRAITURE.

IN all that has been said or written of late upon chemical manipulations, how to build skylights, &c., it seems to me that a very important point has been overlooked by our experimental photographers, and that is the necessity of instantaneous sittings in photo-portraiture. What would more facilitate the true artist in photography in carrying out his conception of the picture he is about to make? Now he may make his artistic drawings in posing, and arrangement of accessories, and throw in the artistic lights and shades, to find oftentimes his whole study completely destroyed, either by a movement or the want of a harmonious expression, which may have been all right when the artist took his last look at his subject, but turns out to be quite a different thing in his picture.

With all the advancement in the art, the vexatious custom of making your subject a living mummy for the space of twenty-five seconds or more still remains with us, and my experience goes to show there is nothing more trying or more dreaded by the sitter, not excepting even the much-abused head-rest. I have long wished for the time when instantaneous sittings could be made, or sittings so nearly instantaneous as to be practically so, and I believe that the time will come. When it does, then good-bye to the horrid head-rest, and the unnatural expressions so often seen in the photographs of the present day. But as far as I can learn, there seems to be no one striving in this direction, and, in my opinion, the present time is the most auspicious for agitating the subject. Photography has advanced so wonderfully in all other directions, that it seems only instantaneous exposure is wanted to make the results perfect, and photo-portraiture a pleasure to the sitter, as well as to the artist.

If photographers would only realize the great importance of an apparent instantaneous exposure, and would go at it with a determination to master it, I think it would soon be an accomplished fact.

I was quite disappointed in not hearing any suggestions upon this point at our last Convention, and my object in calling attention to it now is to stir up our experimental photographers, in the hopes of seeing, at

least, some advancement in this direction at our next Convention, and to then and there give it the consideration that its importance to successful photo-portraiture demands.

It is by experimenting upon such subjects individually, and comparing the results at our annual conventions, that will tend to make the conventions of more practical importance, and will, undoubtedly, in time accomplish what we are all striving for—the perfection of our art.

A. A. PEARSALL.

Brady's Gallery, New York.

INTENSITY.*

BY GEORGE H. FENNEMORE.

MANY ask, in Sphinx and otherwise, the question, "How can I work my chemicals so as to get sufficient intensity at the first development?" I think many ask this with a false idea as to what they really want. I have reference now to the production of portrait negatives, and shall confine my comments entirely to them.

Now, while I fully agree that it is most desirable to produce a perfect negative at the first development, I entirely *disagree* with the opinion of a learned professor, that redevelopment is but a poor excuse for bad manipulation; although I am fully aware that bad manipulation is the cause of a great deal of doctoring in the shape of intensification. Intensification is not only desirable in some cases, but in many it is absolutely necessary.

Take, for instance, children, very aged people, and another class called nervous people, who, when sitting for a portrait, tremble as though they were sitting on an electric battery. This is the bitter part, that, taken with the sweet, goes toward making the everyday experience of the practical photographer. *He* cannot, as the amateur can, choose his own subject and his own time, and then, because he is successful, crow over it, and say, This is the way to do it, and the only way!

* This article was prepared at our request for *Photographic Mosairs*, but owing to continued absence of Mr. Fennemore, it was received too late. We know our readers will be glad to see something from him once more.—Ed. P. P.

The practical photographer must take them as they come. If they can sit quiet, and he understands his business, there will be no difficulty; but if they are restless, be they young or old, he must necessarily give a very short exposure, and the result in nine cases out of ten will be a failure, if he depends upon the first development. Redevelopment, then, and intensification being necessary in many cases over which we have but little control, it does not follow that we should adopt the same course with the negatives, over which we have *full* control, as many are in the habit of doing.

Intensity in a negative is simply a means to an end, that is to say, the dark or intense part is to keep the paper white, until the transparent part has allowed sufficient light to pass through to reduce the silver sufficiently to form the dark parts of the print. If we go beyond that we do too much; if we fall short of it, we do not do enough. Unfortunately a great many photographers, while belonging to the former class, place themselves in the latter, and imagine they do not do enough, consequently they take a negative that is plenty strong or intense enough for a first-class print and redevelop or intensify it till all the merits it had are buried out of sight. Prints from such negatives are worthless as true representations of the persons they are taken for, but they have one merit in the eyes of the producer: they are clear, which means black and white.

Again, intensity is used to cover up many defects; as, for instance, foggy negatives. They pile up the deposit on such negatives, in the vain endeavor to make the shadows print deep, and although they succeed in making a slow-printing negative, it is still flat and without vigor.

The question, then, is not so much how to work the chemicals in order to produce the desired results, as it is to know how to manage the light in order to produce the proper contrast in the first place; and then, if your chemicals do not give the result desired, to find out the reason why. But the very foundation of success, in either case, will depend upon his knowing a good negative when he sees it. Many will laugh at this, perhaps, but it is nevertheless true, that one-

half of the so-called photographers in the country really do not know a good negative when they see it. I mean, of course, in point of intensity and contrast. There are many good chemical manipulators, but very few who know how to illuminate the sitter properly.

So far, I have said a good deal that many know but don't think of. We have been breaking the shell, as it were; we will now try to get at the kernel. Supposing you to be sufficiently expert in the dark-room to make a clean negative, there are three things necessary to know, in order to get a negative of proper printing intensity: 1st. How to light the sitter. 2d. How to expose. 3d. How to develop properly. Too much importance cannot be attached to the proper illumination of the sitter. A full front-light should never be used, but should reach the sitter principally from the side, with just sufficient top or front-light to soften the shadows. On the extreme shadow side a light screen may be used, but should not be placed too near the sitter. The camera tube should be protected with a hood long enough to shut out all but a few feet each side of the sitter. Before exposing, raise or lower the side curtains until the head and shoulders only are brilliantly illuminated, the rest of the figure being in half-shadow. Now, if you look on the ground-glass, many of you will be surprised at the brilliancy of the image, to what you have been usually getting. If the plate is now properly exposed, a fine round negative, sufficiently intense, will be the result. The time of exposure of course will depend upon the amount of light and the time of day. A little experience will soon tell you how much time is needed. The developer has a great bearing on the intensity of the negative. For a full exposure, a weak developer should be used; for a short exposure, use a strong developer. If the light is variable, and you are in doubt about the exposure being right, commence by using the strong developer; if you find it starts up too quick, run it off and pour on the weak developer. The two developers, in some cases, can be mixed to advantage. If, after adopting the above system of working, your negatives still fail to be intense enough, vary the collodion.

To do this, keep two stock-bottles of collodion, made as follows: No. 1. Collodion containing iodide only, say 7 grains of iodide of cadmium to each ounce of collodion. No. 2. Collodion containing equal parts of iodide and bromide of cadmium, $3\frac{1}{2}$ grains of each to the ounce. Now, if your ordinary collodion gives negatives wanting in intensity, add a little of No. 1 and try it, and so on, till you get it to please you. If, on the other hand, it works too strong or intense, add No. 2. By using No. 1 you increase the iodide and decrease the bromide, and *vice versa* by using No. 2. In many cases the addition of a little gun-cotton to the collodion, thereby making it thicker, will give an increase of intensity. A negative, to print well, should not be so intense but what you can see to read through the most intense part in a strong light, but the deepest shadows should be absolutely bare glass.

Speaking of intensity reminds me of an amusing incident that occurred to me some months ago. A photographer in Ohio, while visiting Philadelphia, called to see me, and asked if I had any objection to his looking at a few of my negatives. I told him no, and took him to a small negative-room, where there were about two thousand in racks. After looking attentively for a while, he said they were very nice, but would I please show him my regular negatives for contact printing. I told him he had been looking at them already. He would hardly believe me at first, and said he thought they were solar negatives. I told him I trusted to be better off by the time I could show him two thousand good solar negatives.

The above incident only shows what a false idea many have as to what a good negative ought to be, especially as to its intensity.

If I have been able to make myself sufficiently understood in the above hints, many that are now groping in the dark will see their way clear. If so, I shall feel amply repaid for what I have written.

WE were in error in saying in the *World* that Messrs. Bendann Bros. would close their Baltimore gallery January 1st. They retain it until sold.

Permanence of Silver Prints.

BY M. CAREY LEA.

AT brief intervals, the question of the permanence of ordinary silver prints comes up again and again for discussion. The loss, when the fading takes place, is almost always serious, often irreparable, and those on whom it falls are apt, and not unnaturally, to express themselves with indignation.

This subject is one that I have paid careful attention to, at intervals, through a series of years, and I here repeat the conviction, which I have before expressed, that a well-made silver print on albumenized paper is perfectly permanent, if kept with any ordinary care. A print, placed in an album or portfolio, or laid between the leaves of a book and left in an atmosphere no damper or otherwise more contaminated than that of an inhabited room, ought to last indefinitely. If it does not, it is my conviction that the fault is with the maker of the print and not with the process.

I shall be able, I think, in the present paper, to give some interesting proofs of the correctness of this opinion.

Seven years ago I printed some silver positives, by different processes, cut them to pieces, toned these pieces in various ways, and then subdivided them, and treated them in various ways with destructive agents. All of these specimens so treated, as well as the originals for comparison, were fastened into a note-book, and the mode of production and after-treatment carefully registered.

After this interval, of between seven and eight years, the originals themselves (by which I mean the portions of the prints which were not subjected to any destructive agency) are fitted to give useful information as to their resisting powers to time.

The first conclusion which follows from a careful examination of these specimens is, that *not a single specimen produced by any of the ordinary methods of printing and toning has faded.*

The treatments in question were:

a. Sensitized on a forty-grain nitrate bath, fumed five minutes with liquid ammonia, and toned.

1. Lime toning.

2. Alkaline chloride.

3. Benzoate of ammonia.

4. Citrate toning (no longer in use, Hardwick's toning bath).

5. Toning and fixing bath (water 8 oz., hyposulphite 2 oz., gold 1 gr., mixed hot and used two or three hours after mixing).

b. Ammonio-nitrate bath, fifty grains to the ounce, toned with:

6. Benzoate toning.

7. Lime toning.

8. Alkaline chloride.

9. Citrate

10. Same treatment as 5.

All of these were washed for fifteen hours, and none show any indications of fading. And I therefore cannot avoid the conclusion that when prints have been made by any of these methods, and after a longer or shorter interval give indications of perishing, there has been a grave want of care on the part of the printer. The fault lies, as every one knows, in the employing of hyposulphite that has been previously used, in fixing too many prints in a given quantity of hyposulphite, and in insufficient or badly managed washing. These sources of fading have been so often pointed out and so constantly dwelt on that it seems impossible but what they should be universally understood.

The wrong that has been done to photography by a neglect of these simple precautions has been incalculable. Even at the present day, no one feels any certainty that a purchased photograph will last more than a year or two. There should be some way of reaching and of punishing those who impose on the public with half-washed, sulphur-toned prints.

My specimens also include prints treated by less ordinary methods. *Sulphocyanide* toning and printing seems uncertain. Some of the specimens have kept very well, others have turned very dark in the whites. The use of sulphocyanide has so completely passed away that it seems scarcely worth while to revive the subject, or I could perhaps point out what were the treatments that gave the best results as to permanency.

Developed Prints.—Some developed prints on plain paper have stood extremely well. Mr. Sutton at one time published a process (I think with serum of milk, but am not

certain), which gave developed prints free from the disagreeable red color which generally characterizes this class of prints, and showing a pleasant sepia tone. Prints made in this way have proved quite permanent, whether kept after a simple fixing or toned to a still darker shade with alkaline chloride. Anything like sulphur toning showed itself, as might have been expected, injurious. I do not recollect the particulars of this development process, and have lost the reference to the original paper. It is, however, the only positive development process I have met with in which a good shade is got without gold toning, and as it appears to give permanent pictures, it might be worth reviving. Much, however, will always depend, I think, in the absence of gold toning, on the pureness of the paper; these prints were developed on a pure linen paper. As between developed prints and sun prints, however, I think the chances of permanence will always be in favor of the sun prints, so far as there may be any difference.

OUR PICTURE.

SUNSHINE AND SHADOW.

J. C. BROWNE, Esq., of this city, and President of the Photographic Society of Philadelphia, spent a few weeks this summer with his camera on the banks of the Hudson as usual. On his return he invited us to an examination of his negatives, and we are free to say that we never saw a *series* of negatives of greater excellence. Not only do the plates evince clear and careful manipulation, but the subjects are chosen with an artistic eye, and many of them are pictorially very beautiful. Mr. Browne, as he has often done before, kindly offered us the use of any of his negatives for the embellishment of our Magazines. Unfortunately, however, the great drawback which has heretofore prevented us from giving our subscribers many a splendid picture we have seen, stood in the way here, namely, there was only one negative of each subject, and it would be folly to attempt to print our large edition from one negative. Even if it could possibly stand the work, it might break, as has frequently occurred, before we had secured half enough prints.

Now, however, we have the Woodbury process to resort to, and in this case, backed up by Mr. Carbutt, it has helped us out. We present this picture, "Sunshine and Shadow," as a beautiful picture with which to end our present volume.

Rev. H. J. Morton, D.D., who seems to know every inch of the banks of the Hudson, has kindly assented to give us a short paper on the present picture, which we append below. It will be found interesting. More examples of Mr. Browne's work shall be presented you hereafter. Our January number will have in it the promised picture of Prof. S. F. B. Morse and his camera.

SUNSHINE AND SHADOW.

BY REV. H. J. MORTON, D.D.

THOSE who pass up the Hudson River in the swift day-boats that ply between New York and Albany, or are whirled along the noisy railroad which skirts its eastern shore, are no doubt able to form a fair conception of its varied beauties. Familiarity with its broad bays and noble headlands and lake-like reaches, where it is locked in by the clustering hills, and seems debarred from all retreat or advance, fails to weary the voyager, and one goes up again and again in car or steamer, with still renewed pleasure at the ever-varying aspects of the noble stream. But still, little idea can be formed by those thus passing, of the thousand quiet beauties which lie hidden among the hills, or rest unnoticed in quiet nooks by the side of small streams, here breaking into wild cascades and there expanding into small lakes, dotted all over with white lilies, or overshadowed by luxuriant forest trees. The writer of this article can never forget the many delightful surprises which he has enjoyed, while wandering, sketch-book in hand, among the lofty hills, or along the secluded valleys which border this beautiful river. "Sunlight and shadow" were there splendidly illustrated in countless shapes and glorious contrasts.

The spot where our picture was taken, is on a point of land which juts out into Newburg Bay, about sixty miles north of New York and nine miles above West Point. It is a peninsula known as "Presquille." The "Matteawan" flows along its eastern

shore; the Hudson washes its western borders. If the spectator could lift himself up about ten feet and look over the low building on the left of the picture, he would see the broad expanse of Newburg Bay spread out before him, and the grand hills which form the north opening of the Hudson highlands bounding his vision southward. This peninsula is now in a high state of cultivation, with a noble mansion ornamenting its central lawn; but originally it was a favorite camping-ground of the Indian, and every furrow of the plow formerly turned up his flint arrow-heads and other stone implements. Standing now on any part of this splendid domain, marks of high culture and advanced civilization are everywhere apparent. Villages dot the surrounding shores, and the river is often white with the sails of sloops, or darkened by the smoke of passing steamers.

A few years ago the scene was one of unbroken solitude and savage nature. Nothing of human life was there, unless a rude wigwam may have been visible, amid the forest reaches, or a bark canoe have been seen, stealing along with its painted occupant beneath the overhanging hills, or shooting arrow-like across the tranquil waters of the bay. The giant oaks that stand now on the river's shore stood there then, for they are many centuries old. One fallen monarch of the race, showed by more than seven hundred rings below its bark, that it had stood for ages overlooking the scene and shadowing the landscape; but all else has changed. The majestic tree known as the "Washington oak," still marks the site of the place where that "father of his country" was wont to land when crossing the bay from New Windsor, which lies on the opposite shore; and this tree must have been nearly as huge a mass of foliage then as it is now, for forty years have added nothing to its visible height or to the spread of its far-reaching boughs. Our artist has made some beautiful photographs of this famous tree, and we hope the readers of the *Philadelphia Photographer* may some day see them adorning its pages. The tree is indeed a study for the artist, and the sight of painters setting before it, and studying its proportions, and fixing its form on their canvas, is a

familiar spectacle. Indeed, the whole neighborhood is full of subjects fitted for their pencils, and with views which would reward the toil and travel of the photographer.

This "point" was a favorite resort of the lamented Mr. T. Cole, whose "Voyage of Life" is so generally known and admired by the lovers of art, having been skilfully engraved and widely distributed. We recall many pleasant hours spent there in his company, and have a lively recollection of the enthusiastic delight with which he sketched the various features of this beautiful region.

If it were not tedious we could tell of endless scenes and incidents of interest connected with this spot. Before the roar of the railroad and shriek of the factory whistles drove them away, a family of bald eagles frequented its wooded borders. Large fish-hawks too made the river-bank their favorite hunting-ground, and it was an exciting pastime to watch the trials of speed which often took place when the hawk, having captured a fish, rose with a shrill cry to carry off his prey to his distant nest. He had far better have kept silent, for that cry was a signal to the eagle, perched on some lofty oak near at hand, and at once he darted forth to dispute the prize. The hawk would immediately mount in the air, the eagle following, and pursuer and pursued soon became two specks in the heavens. But the eagle was the swifter bird, and by and by the hawk would have to let go his prey, when the eagle, folding his wings, would drop like a cannon-ball in its track, and catch it before it reached the water. Then he would fly slowly to some near tree and quietly devour his captured meal, while the fish-hawk would swoop off complainingly, to make another effort after a breakfast.

At times we have seen the eagle feeding on a fish that had been dropped on the shore; he was generally surrounded by a whole congress of crows, who walked about him cawing and ruffling their feathers, and showing unmistakable designs of sharing in his banquet. The eagle would watch them with great gravity, turning his head slowly from side to side as the circle of crows ventured to approach him; suddenly he would make a forward stride, as if to strike the intruders, then a cloud of black

wings filled the air and a clamor of discordant cries added to the confusion, until the temporary alarm subsiding, the dusky-coated crowd would settle down in a circle, and the same scene of provocation and resentments would be re-enacted. The difficulty generally ended by the flight of the eagle with the fish in his talons, followed by the crows, with the cry of "stop thief!" which, like that cry in crowded streets, often proved ineffectual.

But lest I weary the readers with the endless series of recollections which come trooping along, as the eye looks on the photograph which adorns this number of the magazine, I must leave "sunshine and shadow" to suggest its many pleasant associations, and carry the reader to similar scenes where they too have watched and wondered, beholding the glorious transformations effected by the influence of shifting lights and changing shades.

NEW YORK CORRESPONDENCE.

AFTER reading of the minutes of the October meeting of the Photographic Section of the American Institute, the November meeting was opened by a discussion between Messrs. Newton, Anthony, Gardner, and Hull, as to the use of albumen as a substratum. It was induced by an article written by me for one of your journals—I have forgotten which—some few months since, wherein I spoke of its retarding effect, &c.

Mr. Newton said that if the albumen solution is made as follows it will not retard:

Albumen,	1 oz.
Water,	10 "

In another bottle mix:

Water,	8 oz.
Alcohol,	1 "

Add the last gradually to the first and filter.

Mr. Gardner said that if you rubbed the plates well with alcohol, acidulated with acetic acid, and flowed thereon your albumen solution as you do collodion, that it would flow as well, and results would be far better than those given where albumen is flowed over the plate while wet, after the

usual fashion. This is so simple a plan that I hope it may have a trial.

From the use of albumen as a substratum for wet and dry-plate work it naturally moved in the direction of collodio-chloride plates.

Mr. Newton said that if a solution to flow those plates was made as follows, and flowed upon plates while fresh, that the results would be good, and that the plates would keep well for a long while; but if the albumen was kept any time, that the results would be bad, a deteriorating change taking place in the bottle, but none after flowing upon the plate. Mr. Gardner had tried albumen with ammonia, &c., but was in favor of the plain albumen, and used while fresh for all work.

Mr. H. T. Anthony exhibited a picture made by a process recently patented by Mr. Wenderoth, of Philadelphia, and styled the "Argento Picture." It possesses in a remarkable degree all the softness and brilliancy of the daguerreotype, without the objectionable trouble experienced in viewing the last named.

The effect as seen by a concentrated and slightly diffused light in the evening was most fine. How the broadly diffused light of day may reduce or add to its charms, I cannot say.

The process is simple, and much as follows:

A silvered plate, as in the daguerreotype, is taken, highly burnished, and subsequently scratched in such a way as to overcome the necessity of holding it at a certain angle before it can be seen. Upon a carbon tissue is next printed the picture desired from a negative; this is then transferred to the silvered plate, finally covered with a piece of glass and sealed with white wax. They are said to be easily made, and not to consume over fifteen minutes in their production.

Mr. Newton proposed the following dry process as a rapid and reliable one, being almost, if not quite, equal to the wet for rapidity:

Hot Water,	10 oz.
Gum Arabic,	200 grs.
Loaf Sugar,	100 "
Tannin,	20 "

Filter through sponge, and apply to the

sensitized, washed plate, after usual manner, developed as follows:

Stock Bottle, No. 1.

Water,	1 oz.
Pyrogallie Acid,	6 grs.
Tannin,	6 "

Silver Bottle, No. 2.

Water,	1 oz.
Silver,	10 grs.

Developer Bottle, No. 3.

Water,	1 oz. or q. s.
Bottle No. 1,	3 drops or q. s.

Flow of No. 3 over the plate a few times, afterwards add of No. 2 a few drops, and of No. 1 as may be required.

Mr. Newton said he had within a few days worked this process, and found that thirty seconds, with a hemispherical lens, third opening, was rather too much time with fair light. Their color is of the most intense character, being of an olive tint.

Some conversation followed upon the production of transparencies for the lantern and other uses. Mr. Anthony stated that for such he had found a great improvement to result from the addition of asphaltum to the collodion; it gave extreme delicacy. As he did not state details, I can give no more information on the subject.

The Exhibition of the American Institute, just closed, has been a marked success, not only in a pecuniary point of view, but in all respects, except that of photography.

So far as fine work is concerned, there was exhibited as fine as any ever seen, but not enough of competition. Are our craft afraid of each other, are they lacking in public spirit, or are they indifferent to the benefits which result from having their productions examined by three-quarters of a million of people?

For the information of those who never or but seldom exhibit, I have this much to say at least, that those who always do so are far the best known to the public, and for that reason, if for none other, are likely to do the most work. The managers of this exhibition erected a building for photographers at an expense of over \$5000, lighted it from the roof after the manner of a gallery, and yet but few appeared of those who

promised to come, and based upon whose promises this considerable expense was incurred. Will not our craft rouse from their too slow condition of to-day; step forward in energy, and represent in their acts an art, a science, one of the youngest and most progressive of them all, as such art and such science should be represented?

Yours,

CHAS. WAGER HULL.

Photographic Society of Philadelphia.

STATED meeting of the Photographic Society of Philadelphia, held November 1st, 1871.

On motion, the reading of the minutes of the last meeting was dispensed with.

The report of the Treasurer was read and accepted.

The Room Committee reported that one hundred and forty-two lantern transparencies had been contributed to the Society's collection during the past year.

On motion of Mr. Graff, the following gentlemen were nominated and duly elected to serve as officers for the ensuing year:

For President, John C. Browne.

" Vice-President, Hugh Davids.

" " John Moran.

" Treasurer, S. F. Corlies.

" Recording Secretary, Ellerslie Wallace, Jr.

" Corresponding Secretary, F. T. Fassitt.

Messrs. John Carbutt and William Bell were unanimously elected members of the Society.

A handsome donation of stereoscopic pictures of scenery in the vicinity of Trenton Falls, was received from Mr. J. Robert Moore of that place. On motion, a vote of thanks was tendered to him therefor.

Under the head of new business, the President said that he had received a communication from Mr. Graves, of the Delaware Water Gap, stating that he had used Mr. Anthony's process of alum in the silver bath for printing purposes, and was much pleased with the results. In using this process, Mr. Graves claims great economy in the use of gold in the toning, having toned two hundred and seventy-eight sheets of

albumen paper with the chloride of gold made by the dissolving of three gold dollars.

The President also exhibited an improved form of dusting-brush for plates, made by Messrs. E. Clinton & Co. of this city; besides being strongly made, it has the advantage of not making any electricity, and so attracting dust, even when the plate is brushed quite hard. The President said that having used it all summer, he could say that it was a decided improvement on the old form. The hair in this brush is peculiar, being long, black, and somewhat coarse.

The President also exhibited some new and elegant samples of mounting cards made by Messrs. A. M. Collins, Son & Co.

Mr. Wilson exhibited some interesting cartes of little chickens by Mr. W. C. North, Utica, N. Y., besides some superb cameo cabinet cards by Mr. Notman of Montreal, and Mr. W. Kurtz of New York, which were greatly admired by the members for their exquisite brilliancy and clean manipulation. Mr. Wilson also exhibited some views of the ruins of Chicago by Messrs. R. Benecke of St. Louis, and J. Landy of Cincinnati, Ohio.

Mr. Bell exhibited some proofs of a new dry process which he is now perfecting; they were much praised for their softness and clearness.

Mr. Carbutt exhibited in the lantern some transparencies made by the Woodbury process, side by side with some by the ordinary wet collodion process. The Woodbury prints were, with but few exceptions, pronounced far superior to the best collodion ones in tone and relief.

On motion, adjourned.

ELLERSLIE WALLACE, JR.,
Recording Secretary.

MOSAICS, 1872.

WE come to our readers with our little annual again, the very liberal reception its predecessors have received urging us to do so. And we offer it with greater assurance this time, because it is *entirely made up of articles which were prepared for its pages especially*. It contains a practical paper from

some one leading photographer in a large majority of all the states in the Union, some of them being parties who seldom write on photography, although eminently capable of doing so.

We think this makes *Mosaics* more attractive than it has ever been before, and we believe it will be appreciated. It is hardly our province to say much about it. It costs only a trifle, and it is now ready for the examination of each one for himself. The following is a list of the *contents*:

Photography in 1871, by the Editor—"Landscape Photography in America," by H. P. Robinson—*Photographic Artists*, by Roland Van Weike—A New Method of Reproducing Negatives, by G. Wharton Simpson, Esq.—Hints about Making Short Exposures, by John M. Blake—*Post-mortem* Photography, by John L. Gihon—The Negative Bath: How to Manage It, by I. B. Webster—How to take Photographs with Natural Backgrounds, by Prof. Towler—Castor Oil in the Negative Varnish, by Kilburn Bros.—*Personal* Photography, by G. F. E. Pearsall—How Good Negatives are Spoiled, by D. H. Anderson—Mounting Prints without Cockling, by Frank Rowell—*Photographic Intelligence*, by C. A. Shaw—How to Save Overprinted Photographs, by G. W. Wallace—How to Strengthen the Negative without Injury to the Picture, by J. C. Browne, Esq.—Printing in the Shade, by H. H. Snelling, Esq.—Filtering, by W. J. Baker—The Decimal System, by Edward L. Wilson—Why Bromine is Employed in the Negative Process, by Dr. Shultz-Sellack—Eyes and Other Things, by J. H. Kent—Old Collodion Made New, by William Klausner—Lighting, Posing, and Draperies, by L. G. Bigelow—What We Want, by J. H. Fitzgibbon—Albumenizing the Glass, by C. A. Zimmerman—About Printing, by Walter Dinmore—The Application of Cameras to the Work, by A. E. Turnbull—Useful Method of Making Corners for Plate-Holders, by F. G. Weller—Toning Operations, by Prof. Towler—The Jamin Lens as an Objective for the Solar Camera, by W. L. Shoemaker—Albumen as a Substratum for Dry Plates, by H. J. Newton—Solar Printing by Development, by Young Chloride—Mr. Per-

kins's Four Experiments, or Curious Facts for Curious People, by Elbert Anderson—Printing and Toning, by William H. Rhoads—Landscaping, by A. F. Clough—The Very Best Skylight, by "Old Argentum"—Practical Hints on the Negative Bath, by A. Simpson—An Easy Enamelling Process, by "Marshall"—The New School, by Oscar G. Mason—Tried and Found True, by John Carbutt—Photographic Criticism, by George B. Ayres—Camphor in the Printing Bath, by John R. Clemons—Why we Hold Conventions, by A. Bogardus, Esq.—To Copy Oil Portraits, by B. Frank Saylor—Compensation in Art, by H. D. W. Moulton—A Few Hints to Beginners, Porcelain Pictures, by G. Schreiber—The Chemical Nature of the Photographic Picture, by Dr. H. Vogel—Developer, by E. A. Kusel—Materia Photographica, by Edward Moelling—Rembrandts, or Shadow Pictures, by R. J. Chute—How to Keep Things Going, by A. A. Pearsall—Old Times, by William Snell—My Experience in the Touching Process, by Charles Fontayne—Hints on Instantaneous Shutters, by Joseph Zentmayer—Worth Knowing, by Edward L. Wilson—And as usual, Many Mites from Many Minds, in the usual style.

This is the seventh year of *Mosaics*. Last year many photographers purchased a copy for each of their employees, as a holiday present. That is a good plan. The better your employees are informed, the better your work is done. Try the experiment.

PENNSYLVANIA PHOTOGRAPHIC ASSOCIATION.

THE stated monthly meeting of the Association was held at the Hall, southeast corner of Tenth and Walnut Streets, on Monday evening, November 13th, President William H. Rhoads in the chair.

Thirty-five members present.

The records of the last meeting were read and approved.

Theo. R. Smith and Daniel Murphy were elected members of the Association.

The room committee reported that they had secured a lease of the room occupied to-night, for one year, at three dollars per night.

On motion, the report was accepted, and the thanks of the Association tendered the committee for the very satisfactory manner in which they had discharged their duties.

Mr. Gihon being called upon, read a very excellent paper on making "Instantaneous Pictures," it being his views more in detail on the subject discussed at the last meeting.

On motion, a vote of thanks was tendered Mr. Gihon, and the paper ordered to be published, with the minutes of the Association, in the *Philadelphia Photographer*.*

Mr. J. C. Browne, President of the Philadelphia Photographic Society, being present, said the views of Mr. Gihon met his own so nearly that there was but little left for him to say. He felt disposed to differ, however, with Mr. Gihon in reference to the bath for quick work. He preferred a new bath, free from alcohol and ether, with a rather fresh collodion of five grains of iodide of ammonium and two grains of bromide of magnesium.

Mr. Carbutt exhibited a dipper curved so as to receive a plate, collodion side down; by which means the film is protected from any impurities in the bath. He said he had not had an imperfect plate since he had adopted that method of dipping them. The gutta percha dipper is heated and the lower end bent, as far up as the plates used will reach, so that the concave side will be next to the film.

Mr. Bell exhibited some very successful dry-plate negatives. One of a vessel under sail, was an evidence of the rapidity of the process. Mr. Bell also exhibited some very beautiful glass positives, made by the carbon process, the tissue being transferred to the glass. They were examined with a good deal of interest, and much admired by the members present.

The nomination of officers for the ensuing year, being next in order, the present board of officers was nearly unanimously nominated for re-election.

* Mr. Gihon's admirable paper is in type, but owing to the press of matter concerning Chicago, which came in just as we were full for press, and which all will sanction our giving the preference, we are compelled to leave it and our German and English letters stand over. We regret it, but it is unavoidable.—ED. P. P.

Mr. Wilson, for the Committee on Chicago, reported that the Executive Committee of the National Photographic Association held a meeting in New York last month, and resolved to issue a call to the photographers throughout the country, to contribute towards raising a fund in aid of the Chicago sufferers, and he understood about three hundred dollars had been collected. Some forty galleries were burned out, and from one hundred and fifty to two hundred persons thrown out of employment. Some had already engaged in other business, and would, probably, not need assistance, but there were others who needed all we could do for them. He proposed that whatever was done by the Association be done in connection with the National Photographic Association, with the understanding that we have credit for what we may do. He proposed that some action be taken at this meeting to get subscriptions, and ascertain as soon as possible how much of a contribution the Association can make. He spoke of a very commendable example that had been set by Mr. Rulofson, of San Francisco, who contributed the proceeds of one day's business in the gallery, and the employees took up a collection among themselves, making a donation from their establishment of nearly one hundred and fifty dollars.

Messrs. Gihon and Schreiber advocated holding a fair for the purpose of selling pictures, the proceeds to go to the relief fund. It was thought that if this was done, it might be possible to join with some other fair and thus save expenses. Objections were raised to this on account of the time it would consume. Now is the time to help those people if at all, while they most need it. After further discussion, and the acceptance of the report of the committee, it was resolved that the committee, Messrs. Edward L. Wilson, John L. Gihon, and R. J. Chute, be empowered to solicit donations in this city from all connected with the trade, as many were unrepresented at this meeting. On motion, adjourned.

R. J. CHUTE,
Recording Secretary.

BIBLIOGRAPHIC.

LEA'S MANUAL OF PHOTOGRAPHY—MARCY'S SCIOPTICON MANUAL.

THE very rapid sale which the first edition of Mr. Lea's Manual met has induced him to write a *second* edition, a copy of which lies before us. We hardly thought it possible for an author to take his work and do it over again, and make it so much better than it was, so fully as Mr. Lea has done.

There were many good things in his first volume, but there were likewise many pages occupied with varied processes and other matter, which were of no practical interest to the general class of working photographers. Such portions Mr. Lea has not only dropped in making up his second edition, but he has replaced them by matter that will interest *all* who may read it, besides increasing the size of the book very materially, thus making it fully one-half new matter. The illustrations are also largely increased, and neatly done.

The arrangement of the book is similar to that of the first edition. The first fifty pages are devoted to an "Introduction to Photography," which includes full instructions to beginners. They are followed by elaborate chapters on "Photographic Optics and Theory of Perspective;" "Photographic Manipulations;" "Theoretical Considerations;" "Photography in its Relations to Health;" "Chemical Manipulations," and "Addenda."

The work is handsomely bound; includes four hundred and thirty-nine pages, and is sold for \$3.75, Mr. Lea being the publisher.

Marcy's Sciopticon Manual.—We have made some effort to get our readers interested in the magic lantern, and we intend to make a great deal more, for we believe that many of them can make a good deal of money out of it. There are some who *have* done so, and we would like to hear of their experience.

The great expense required to fit out an oxyhydrogen apparatus has debarred many from the privilege of using the magic lantern, and made its possession out of the question for small exhibitions and home amusement among those who are not wealthy.

Photographic Mosaics, 1872, has some fine illustrations in it. It is ready. 50 cents.

That obstruction is now removed by the introduction of the *Sciopticon* by Mr. Marcy, of which we have several times spoken favorably. To still further meet the desired end of popularizing his form of magic lantern, and to enable photographers to make slides for it, Mr. Marcy has introduced and just published a *Sciopticon Manual*, a copy of which lies at our hand. Its contents are useful, entertaining, and instructive. In brief, as his preface tells us, and as we find by reading it, it treats of the optical image without a lens, with a lens, in the camera obscura, in the eye, in the photographic camera, and on the screen; of the peculiarities of, and corrections required by lenses; of the sciopticon, its construction and management; of dissolving views, phantasmagoria, and the ghost; of lantern slides, in all their variety; of making slides by the wet and dry processes, by Marcy's photographic printing apparatus, by the sciopticon, and other processes; of how to paint slides; how to perform chemical experiments in the lantern; and to all is added an elaborate catalogue of lantern slides, to assist the purchaser in making selections. It contains many capital hints for those who have magic lanterns, for those who are going to get them, and for those who never expect to have them. The book is handsomely printed, contains one hundred and forty pages, and is sent to any address for 50 cents, by Mr. L. J. Marcy, 1340 Chestnut Street, Philadelphia.

Any photographer who has the time and the push and pluck to undertake it, can make money by giving sciopticon exhibitions in his own village, and those who have good negatives can find a ready market for slides from them in all our larger cities.

RESPONSE TO MR. KURTZ.

DEAR SIR: I see in the November number of your *Philadelphia Photographer* that Mr. Kurtz, not being satisfied with the proceedings or answer of his society, volunteers his services "in an unofficial way" to criticize my letter. That the president of the New York German Photographic Society would so far forget himself as to do so seems a little laughable, for why will one man

shoulder the responsibility unasked? It seems to me that an overanxious desire to bring himself before the public must be the only excuse for such rashness.

There is nothing of logic in Mr. K.'s letter, and was it not for a few words, I would not pay any attention to it. I have nothing to say about my translator further than to state that he is master of what he undertakes, and that his sworn affidavit can be had to the originality of the manuscript of my book. Mr. K. says that my letter is not exactly complimentary to Mr. Hartmann, whose head is perfectly clear, who knows what he is writing about. Does Mr. K. compliment him (Mr. H.) *more*, when he claims that my book is translated from Mr. H.'s articles, and *then* says that Mr. M. is not clear at all, and not master of his *subject*? It seems that Mr. K. has contradicted himself here, and not only here, but when he says that "if the book does not sell for \$1.50 *now*, it is not the fault of Mr. M., but it is the fault of the book, for it contains about as much reading matter as a small love-letter."

If the book was perfectly clear from Mr. H.'s hands, and not changed by me, why would it not be so now? I will tell you why. I never saw Mr. H.'s articles until after my book was written and printed, and do not think that there is now similarity enough about them to make a continued strife. I will not stop to dispute with Mr. K. about the meaning of minor words, for every photographer is respectfully requested to read carefully all the evidence, also the *reviews* of the book and varnish that have been published, and if they desire further evidence or information, send for a copy of the book and compare for themselves.

Kind readers, I have no disposition to annoy you with a long harangue, and as Mr. K. so kindly offered his advice, I would simply say to him, live up to what you preach: give us something good and new occasionally in the journals, and not prevent others, by a waste of ammunition, in trying to find fault or pick up old sores to make disturbances that have been disposed of.

Truly yours,

J. W. MORGENEIER.

SHEBOYGAN, WIS., NOV. 16, 1871.

NOTE.

We now think our readers have had enough of this matter, and here it must close. We endeavor to keep our pages as free as possible from discussions of a personal nature, but in this case we felt that we were warranted in breaking our rule. Mr. Morgeneier, a good-natured, honest photographer (so far as our personal and business acquaintance enables us to judge), finding the negative retouching process attended by a good many difficulties, not only produced a really excellent varnish to give a proper retouching surface to the negative, but issued a little book of *instructions* in negative retouching, which he offered at a price he thought to be fair, and which the public could use their option in buying. All this he claims to have done from knowledge acquired in his practice. Copies of his book found their way to Germany, and on comparing the contents with articles which had been read before the Berlin Society for the Advancement of Photography, by Mr. Hartmann, the members of the Society declared that Mr. Morgeneier had copied his "instructions" from Mr. Hartmann's papers. They communicated their suspicions to the German Photographers' Society of New York, and that society having appointed a committee to investigate the matter, acquiesced in the opinion of the sister society in Berlin, and sent us their report for publication. Our esteem and respect for these societies, with several members of which we are well and personally acquainted, led us to publish their report (for it was a matter which concerned all of our readers, who should not be allowed by us to pay an exorbitant price for anything of the nature of instruction), without looking into the matter personally. Mr. Morgeneier, however, privately assured us, most warmly and positively, that he was not guilty, and in all fairness we could not refuse to allow him to defend himself in our pages, thus leaving it to our readers to form their own opinion in the matter unbiassed by us. We hoped the matter would end there, but Mr. Kurtz asked for space to respond to Mr. Morgeneier, and in turn Mr. Morgeneier demands the same privilege.

Here we desire the matter to end. Mr. Morgeneier found he could afford his book

at a cheaper rate than he at first fixed upon it, and he reduced it before this correspondence began. He now offers to *give* it to every one who will send him a three cent stamp for postage. This he does that the contents may be compared with Mr. Hartmann's articles, which we published in the *Photographic World* for May and June. We have made the comparison carefully, and in all frankness we must say that there are several sentences which sound very much as if the author of one was familiar with that of the other. Yet it is no new thing, whatever, for different authors to write very similar things. It has occurred many times in photography, and only recently Colonel Stuart Wortley, of London, has been accused by Mr. M. Carey Lea of appropriating as his what Mr. Lea claims to belong to him. We think we are not mistaken in saying that within a few years Mr. Lea has been accused of similar conduct. This is not to be wondered at in such an art as ours. "Great minds often think alike," we are told.

The object of our German brethren in New York was, out of the kindness of their hearts, to prevent their coworkers from being imposed upon. Such conduct cannot be too highly praised, and we hope every one of our subscribers will apprise us, as they have often done, when they have any suspicions of the kind.

Mr. Morgeneier's business transactions have been with us of the most straightforward character. Our slight personal acquaintance with him, at the last convention in Philadelphia, would not warrant us in suspecting him of being a plagiarist knowingly. He now offers to *give* his book away, content with the reward he is receiving for producing his popular varnish.

The advice that both Mr. Kurtz and he gives, in the last part of their communications, is excellent, and we hope that all photographers will follow it abundantly.—ED. P. P.

MR. BOGARDUS writes us that although the sums received for Chicago are not large, the parties who *have* given express the kindest sympathy for the sufferers. This is pleasant any way.

CORRESPONDENCE.

THE ORIGIN OF THE CHICAGO FIRE NOT
IN A PHOTOGRAPHIC GALLERY.

PLEASE say to our brother photographers in the next number of your valuable *Philadelphia Photographer*, that as chairman of the Committee on Insurance, I am most happy to announce to my brothers of the National Photographic Association, and all others interested in photography, that it is *now a fixed fact* that the *great Chicago fire did not originate in a photograph gallery*, for I do assure you that when I first read the report of the fire in our morning papers, I trembled in my boots, and said "if this fire has started in a photograph gallery, the insurance men will wipe us all out." Such would have been their rage and anger that every photographer in the land would have been compelled to flee the wrath to come. As it is we are safe. Our insurance company is a fixed fact; the word from all parts of the United States is, "Let us all come to St. Louis next May prepared to take stock in the Photographers' Insurance Company." *So say I.* Let every brother photographer, and all who feel an interest in the success of our insurance company, furnish me with all the information they can on the subject immediately, that I may be fully posted as to the number of galleries destroyed by fire; their value, &c., &c., since the *commencement* of the practice of photography, *which has nothing to do with daguerreotyping*, as there are no daguerreotypes made, or *but few* at this time, and can have no bearing on the subject of *insurance* on photographic galleries of these times.

Respectfully yours, &c.,

J. C. ELROD.

LOUISVILLE, Ky.

NEWS FROM CHICAGO.

IN addition to the matters pertaining to Chicago which appear on other pages, we make a few extracts from letters which we have received from some of the sufferers. The first is from Mr. Hall, who is the well-known President of the Chicago Photographic Society, and who is preparing to open again at No. 217 W. Madison Street.

"I am pleased, *very much pleased*, with the prompt action of yourself and others in trying to raise something to aid the suffering fraternity of our city. Not that I desire any such aid myself, for I am blessed far beyond many others; I have my health and my home left undisturbed, which I cannot feel too thankful for. But you will see by the report which you will receive from Mr. Douglas, Secretary of our meeting held at Mr. Charles W. Stevens' store last Saturday evening, that we have many among us whom Providence has laid a heavy hand upon, and who will need all that can be raised to carry them and their families through the cold long winter. May God bless your efforts, for a little assistance will lift a dark cloud and a heavy weight from many worthy but almost crushed spirits; and I must mention right here that at the meeting, Saturday evening, my generous neighbor Mr. Battersby, who is located near my new gallery, and was not disturbed by the fire, offers to give seventy-five dollars to this relief fund. Mr. Wing, of Boston, was also present, and offers, notwithstanding he lost a gallery here, to give a large amount of apparatus, and I am sure others of our city will follow their example as soon as they know of the authorized committee to receive the articles and money.

"I cannot refrain from mentioning two or three kind offers made me immediately after our great calamity. I had many offers of assistance, but these coming from such unexpected sources is why I mention them. They will all be long remembered.

"Mr. J. H. Humphry, from Baudeau, Canada, a photographer whom I had had some slight business transactions with, but never met but once, wrote me, saying: 'Are you one of the sufferers by the dreadful fire? If so, what can I do for you? I have some money by me which you are welcome to if you need it.' Mr. F. M. Hayes, of Danville, Ill., wrote me, saying: 'I have just fitted up a fine gallery, if you can do anything with it come and take it.' Mr. P. B. Green, the worthy Treasurer of our Association, who had the misfortune last winter to be burned out, and which proved to be his good fortune at this time, for he was well fitted at his house, 315 West Jackson Street, to

carry on landscape photography, came immediately after the fire to me and offered me an interest in the business of photographing the ruins, which has given me plenty of work, at profits enough to pay my living expenses while my gallery is being put in order. His kindness is duly appreciated and will be long remembered. By the way, Mr. Green has the largest collection of negatives of Chicago before the fire in existence, which I hope will prove a fortune to him.

"Fearing that I have wearied your patience, I will close by signing myself yours truly,
ALFRED HALL."

In addition to the above, we have a letter from Mr. S. W. Sawyer, who desires us to correct the report in the last issue of the *World* that he had "gone into the commission produce business." He says he has only done so temporarily until he can get his insurance and start a gallery again.

THE CHICAGO RELIEF FUND.

A NOBLE EXAMPLE.

As will be seen by the list of acknowledgments on another page, the amount received for the aid of the fraternity in Chicago who suffered great loss by the fire in that city is very small, and worse yet, the number of parties who have thus far responded is still much smaller in proportion than the other.

Now it hardly comes within our province to urge this matter upon our readers. Would that we were personally able to relieve all the wants of our fraternity instead. Yet so long as trades-unions, and lodges, and societies, and boards of trade, chambers of commerce, &c., are doing their utmost to relieve the suffering members of their fraternities, and the journals devoted to their several interests are using their influence in the good work, we do not think that we should be idle in the matter.

We cannot account for the few responses to the call of the Executive Committee of the National Photographic Association, unless it be that too much importance is attached to the fact that a great deal of money has been collected for the Chicago sufferers already. True, there has been a great deal

collected, and a great deal of good is being done with it, but it hardly reaches those who are members of our fraternity. The most of it is devoted to the absolutely poor and lower classes, and those that belong to our fraternity will hardly share with such. There are operators, and printers, and men of all work, who are burned out of house and home. Many of these have families, and having lost all, they and their families must want many comforts during the cold winter coming, which a few dollars from us would relieve. We are endeavoring to get at the true state of affairs, and may be able to give a synopsis in this same number. There were over forty galleries destroyed, we learn, and in each there were from five to twenty-five employed, men and women. The case of Mr. Rocher's employees may be taken as an average example—out of ten, eight lost everything.

Now shouldn't we help them? It is not expected that we should urge this matter. It ought not to be needed, but as every one can do something we hold up the example of one noble member of our fraternity, whom all who were at Cleveland last year will remember, for others to follow as near as they can. We do not expect every one will do as *much*, but many can do as *well*. We know that there are those who cannot really afford to do anything. We *know* this from the personal intercourse we have with them in our editorial capacity. Such are of course excusable.

A *little* self-denial, a *little* effort, will work about the desired end. It may *hurt* a little *now* to do it, but the wound will soon heal and be forgotten.

We now append the "example" alluded to in the way of correspondence, which will explain itself.

SAN FRANCISCO, Oct. 30th, 1871.

DEAR SIR: This morning I received a slip bearing your signature, asking aid for *Chicago's suffering photographers*. You will see by the following correspondence that we recognized the necessity of some action before your slip came to hand. I am overjoyed that we have been permitted to employ the amount, realized at our gallery on the day set apart for the relief of the Chicago sufferers, in response to your call. I also take pleasure in testifying to the sympathy and

liberality of our employees, in behalf of their needy fellow craftsmen; each of whom subscribed the amounts set opposite their names in the inclosed list, in all \$54.50, making a total of one hundred and forty-one dollars and eleven cents, for which amount please find inclosed draft on New York and return receipt for same.

I am truly glad the National Photographic Association avails itself of this opportunity to demonstrate its usefulness, in not only making us better photographers, but better men also.

Very truly yours,

WILLIAM H. RULOFSON.

RELIEF FOR THE PEOPLE OF CHICAGO.

SAN FRANCISCO, Oct. 11th, 1871.

TO HIS HONOR MAYOR SELBY, *San Francisco.*

DEAR SIR: The undersigned, desirous of rendering more efficient aid to the movement for the relief of the Chicago sufferers by the recent fires than their private purses would allow, beg leave to tender to your Honor the receipts of our photographic establishment, on any day you may be pleased to name. An early answer would enable us to make needful preparations to swell the receipts, and afford us an opportunity for advertising. We would be pleased if you would appoint a cashier to attend on the occasion.

Respectfully yours,

BRADLEY & RULOFSON, Photographers,
429 Montgomery Street.

MAYOR'S OFFICE, San Francisco,
Oct. 11th, 1871.

MESSRS. BRADLEY & RULOFSON.

GENTLEMEN: The kind offer of one day's receipts of your photographic establishment towards the relief of the Chicago sufferers, is most gratefully appreciated and accepted. If that day will be convenient, I will name *Tuesday next*, the 17th instant, and request you to act yourselves as treasurer for the occasion.

Your most obedient servant,

THOMAS H. SELBY,

Mayor.

Our long acquaintance with the people of San Francisco leads us to believe that they will require no urging to avail themselves of this opportunity to aid the sufferers by the most calamitous conflagrations known in the history of the world, by obtaining specimens of the work of our art gallery, which has achieved an almost world-wide fame. All the rules established for the protection of our patrons will be strictly enforced on the occasion, as we wish to make the

result creditable alike to the liberality of San Franciscans and to ourselves as artists.

All pictures taken on that day, will bear an inscription, commemorative of the occasion.

BRADLEY & RULOFSON,
429 Montgomery Street, San Francisco.

From the San Francisco Bulletin, October 31st.

RELIEF FOR CHICAGO PHOTOGRAPHERS.—The great conflagration in Chicago having swept away all the principal photographic galleries in that city, begging the proprietors and employees, and throwing them out of employment together, the President of the National Photographic Association has issued a card urgently soliciting contributions from their brother craftsmen throughout the United States in behalf of the sufferers.

Under these circumstances, Messrs. Bradley & Rulofson have asked his Honor, Mayor Selby, to set aside the amount received at the gallery on the day set apart for the benefit of the Chicago sufferers, for the especial benefit of the destitute photographers of Chicago. In addition to the amount realized as above, the employees of Messrs. Bradley & Rulofson have subscribed \$54.50 for the Chicago photographers. It is probable that contributions will also be taken up in other leading galleries of the city for the same purpose.

Subscriptions raised for the photographers suffering by the great Chicago fire, by the employees of Bradley & Rulofson's photographic gallery, San Francisco, November 1st, 1871:

Max Bachert, . . .	\$5 00
Dwight W. Taylor, . . .	5 00
F. W. Wightman, . . .	5 00
O. T. Johnson, . . .	2 50
A. L. Hanes, . . .	2 50
J. C. Williams, . . .	2 50
E. J. Kildare, . . .	3 50
Thomas Calverly, . . .	2 50
Frederick Monell, . . .	2 50
Hiram Miller, . . .	2 50
Fong Noy, . . .	2 50
C. Y. Lamb, . . .	1 00
Fong Ah-Sing, . . .	2 00
W. H. Marsden, . . .	2 00
J. D. Strong, . . .	50
Alexander Robertson, . . .	2 50
Ah Chew, . . .	1 00
Miss L. K. Judy, . . .	2 50
Charles Meick, . . .	5 00
Miss Weston, . . .	2 00

\$54 50

In addition to the above the following donations have been received through A. Bogardus, President:

Wm. Klauser, \$10; Well G. Singhi, \$5; G. Wright, \$10; E. Schuler, \$1; John P. Ryer, \$2.50; George Sly, \$2.50; Charles Slauser, \$2.50; H. L. Dean, \$5; Geo. Weingarth, \$2; S. F. Adams, \$1; J. Baldwin, \$5; Bushby & Hart, \$10; C. Davis, \$5; L. E. Stearns, \$5; J. S. Mason, \$1; N. S. Leeman, \$5; James Sinclair, \$5; H. S. E., \$1; R. Goebel, \$5; L. G. Bigelow, \$5; J. N. Webster, \$2; H. J. Newton, \$20; L. F. Reynolds, \$3; Wm. H. McCormac, \$5; A. Bogardus, \$25. Total, \$143.50. Aug. Semmendinger, one copying stand.

Through Albert Moore, Treasurer:

Wilson, Hood & Co., \$100; A. M. Allen, \$10; Gatchell & Hyatt, \$10; A. Kracaw, \$10; Jas. Lett, \$10; J. F. Ryder, \$10; M. & W. Garrett, \$5; C. M. Fillmore & Bro., \$5; J. M. Miller, \$5; D. H. Wright, \$5; Bruce & Fisher, \$5; S. W. Beers, \$4.25; Lewis Alman, \$2; H. Noss, \$1; Wilt Bros., \$1; H. A. Linebach, \$1; J. G. Barrows, .50. Total, \$184.75.

Through Edward L. Wilson, Secretary:

J. C. Browne, \$5; R. J. Chute, \$10; T. Gaffield, \$10; Crosseup & West, \$5; W. W. Washburn, \$25; C. H. Washburn, \$5; C. Krinin, \$5; C. Eiseaman, \$2; W. G. Chamberlain, \$5; E. J. Muybridge, \$10; C. C. Giers and employees, \$18; S. Klugherz, \$2; Edward L. Wilson, \$50. Total, \$293.11. Whole amount, \$621.36.

Chicago Photographic Association.

REGULAR monthly meeting of the Chicago Photographic Association, held Wednesday evening, November 1st, 1871, at the residence of A. Hall, No. 413 West Monroe Street. Meeting called to order at 8 o'clock. President Hall in the chair. The book of records, containing the constitution, by-laws, and signatures of members, and the minutes of all meetings of the Society, were burned. The minutes of last regular meeting were read from the published report in the November number of the *Philadelphia Photographer*. After reading of the minutes, as published, President Hall addressed the Association, his remarks relating particularly to the great fire, the suffering ones of the fraternity, and the future of photography in our city. The secretary read extracts from the *Philadelphia Photographer*, letters from Edward L. Wilson, and the published proceedings of the Executive Committee of the National Photographic Association, called together in New York, to act as a relief

committee for the suffering ones of the fraternity in our city.

On motion, the thanks of the Chicago Photographic Association and all photographers of our city were tendered to A. Bogardus, Esq., President of the National Photographic Association; Edward L. Wilson, Esq., Secretary of the National Photographic Association, and the Executive Committee of the National Photographic Association, for their prompt action for the relief of their suffering brothers of the fraternity in the city of Chicago.

On motion, a committee of three, consisting of G. A. Douglass, George Klein, and John Hamer was appointed to secure all possible information regarding the condition, losses, &c., of the photographers of our city, reporting at the earliest possible moment to the secretary, who is instructed to arrange the same for publication.

Under suspension of the rules, the following named photographers were elected members of the Association: Wm. S. Wheeler, C. S. Barkman, George A. Barnard, B. P. Higgins, L. N. Smith, Edward Frost, John Dillon.

On motion, the subject for the evening's discussion was decided to be, "The Future Prospects of Photography in Chicago." Discussion opened by Mr. Hall, followed by Messrs. Green, Barnard, Moore, Cunningham, and others.

After a protracted session, the meeting was "called from labor to refreshment," by President Hall, who invited all "below," where they were astonished to find a most generous spread of "good things," and were met by the smiling faces of the wife and daughters of our president, and welcomed to the tables loaded down with substantial and delicacies, fruit, flowers, &c. Business and our calamity were forgotten for a time, while ample justice was done to the "good cheer" offered. Willing hands and smiling faces of the hostess and her handsome daughters kept the fortunate photographers "developing" the good things until they cried, "Enough!" and retired fully satisfied with the results.

After refreshments, again called to labor by the president.

On motion, a vote of thanks was unani-

mously tendered to President Hall, his wife, and daughters, for their generous hospitality and collation.

Messrs. Hine, Green, and Barnard exhibited a large collection of stereoscopic views of the ruins.

On motion, adjourned to meet at Mr. Hall's new gallery, 217 West Madison Street, Wednesday evening, December 6th.

G. A. DOUGLASS,

Secretary.

OUR FRATERNITY IN CHICAGO.

THEIR NEED.

At a meeting of the photographers of Chicago, held at the photographic warehouse of Charles W. Stevens, 564 West Madison Street, Saturday evening, November 18th, for the purpose of learning the names and losses of the fraternity, sufferers by the great fire of October 8th and 9th, A. Hall, President of the Chicago Photographic Association, was appointed Chairman, and G. A. Douglass, Secretary. Meeting called to order and the reason stated for calling the meeting. The Secretary read an extract from the *Photographic World*, stating that Messrs. Bradley & Rulofson and their employees had donated \$141.11 for the aid of the fraternity in Chicago. (Cheers.)

On motion it was requested that each photographer and employee in photographic galleries present should make a statement of their losses and present condition to the Secretary, who would take it down and forward it to the Secretary of the National Photographic Association.

Mr. Joseph Battersby, one of the fortunate ones of the fraternity who escaped the terrible visitation, in a few remarks, expressing most heartfelt sympathy and kind wishes for the future of his unfortunate brethren, donated \$75 as a nucleus for a relief fund.

On motion of Mr. C. W. Stevens a vote of thanks was tendered Mr. Battersby for his most generous donation and sympathy.

On motion, Mr. Charles W. Stevens was appointed a committee of one to receive donations for the relief fund.

On motion of Mr. C. W. Stevens, a Distributing Committee was appointed, consisting of J. Battersby, A. Hall, and G. A.

Douglass, whose duty it shall be to distribute all moneys or other relief placed at their disposal to those who are needing the same.

Mr. Charles W. Stevens gave an account of his attending the session of the National Photographic Association Executive Committee, called together in New York immediately after the fire, and their action in issuing at once and distributing three thousand circulars calling on the fraternity in the United States for assistance for their suffering brothers of Chicago.

Mr. S. Wing, of Boston, one of the sufferers by the fire, stated that, although a heavy loser, he had something left, and would contribute to the relief fund \$100 in apparatus, consisting of camera tubes, boxes, chairs, &c., which would be placed at the disposal of the committee appointed to distribute as they should elect.

Conversation was now the order of the evening, while the Secretary took down the names and losses of those present. Incidents of the fire, escapes, &c., was the order, and photographers were present who had adventures, thrilling enough for the most exacting. One incident was noted particularly. Miss Izart, the lady who waited on the reception-room of Messrs. Copelein & Son, 131 Lake Street,—this brave lady went to the gallery at three o'clock on the morning of the fire, Monday, Oct. 9th, broke open the door and the desk, secured the books and papers, and all else she could carry, and did not leave until driven from the rooms by the flames, and her dress was burning. So much for one brave woman.

A careful estimate of the losses aggregate a total of \$250,000. The individual losses are as follows, as near as it has been possible to arrange them:

Barnard & Matthews, 24 Washington Street. Loss, \$10,000; insurance, \$4000; will get \$3500. Mr. Barnard is making and publishing views; not certain of resuming gallery work again.

C. D. Mosher, 30 Washington Street. Loss, \$20,000; insurance, \$8000, Chicago companies; doubtful whether he will realize much. Starts again on Wabash Avenue, December 10th.

E. L. Brand, 28 Washington Street. Loss, \$30,000; insurance not known. Is reopening on Wabash Avenue.

S. W. Sawyer, 24 Washington Street. Loss, \$40,000; insurance, \$11,000; will get, he thinks, \$2500. Intends to resume if he can.

J. H. Abbott, 22 Washington Street, 121 South

Clark Street; two galleries. Loss, \$10,000; insurance, \$3200, Chicago companies; loss probably total. Is making views, and will open a gallery on Blue Island Avenue soon.

S. M. Fassett, corner Wabash Avenue and Van Buren Street. Loss, \$75,000; insurance not known. Will start again.

A. S. Nardick, 187 South Clark Street. Loss, \$1200, total. Left the city, and started again in Rockford, Ill.

S. Wing, South Clark Street. Loss, \$3000; no insurance. Will start again.

B. L. Rider, 155 South Clark Street. Loss, \$2000; no insurance. Printing views for Lovejoy & Foster.

— Gocus, South Clark Street. Loss, \$1000.

T. B. Williams, corner South Clark and Madison Streets. Loss, \$1200; no insurance. Left the city; in car at Victor, Iowa.

D. Johnson. Loss, \$300; no insurance.

J. W. Chase, 205 East Madison Street. Loss, \$1500; no insurance.

W. S. Perkins, 493 South Wells Street. Loss, \$2500; insurance, \$1400, Chicago companies; will probably get all.

B. P. Higgins, East Van Buren Street. Loss, \$1200; insurance, \$850, Chicago companies; will not get much. Cannot resume without help.

C. S. Barkman, 114 South Clark Street. Loss, \$900, total. Out of business. Cannot resume without help.

A. Hall, 122 Lake Street. Loss, \$6500; insurance, \$4000; will get something; very little expected. Lost all his volumes of *Philadelphia Photographer* and *World*. Will open soon at 217 West Madison Street.

Copelein & Son, 131 Lake Street. Loss, \$8000. John Mastaman, 147 Lake Street. Loss, \$600, total. Not in business; expects to resume soon.

Mr. Hine, with Copelein & Son. Loss, \$1000, household effects. Lost his series of Yellowstone negatives made last summer, after three months' labor with a government exploring party. Lost files of *Philadelphia Photographer* from date of publication, *Photographic World*, *Photographic News*, English, *Illustrated London News*, several volumes, and the best photographic library in Chicago. Total loss, about \$7000; no insurance. In business again, of the firm of Copelein & Hine. Full of Chicago vim and enterprise.

G. S. Moore, 75 Lake Street. Loss, \$2500; insurance, \$800. Not in business.

Mr. Tyrroll, 109 South Clark Street. Loss total, \$1000.

B. Kilholz, Lake Street. Loss total, \$1500.

O. F. Weaver, 108 & 111 Lake Street. Loss, \$8000; insurance, \$3000. In business at Beaver Dam, Wis.

J. W. Wykes, Lake Street. Loss, \$3000, total.

P. B. Green. Loss, \$400. In business.

George Snyder, North Clark Street. Loss not reported.

Thein & Ford, North Clark Street. Loss not reported.

Mr. Heyde, North Division Street. Loss not reported.

Mr. Peitz, North Clark Street. Loss not reported.

Mr. H. Rocher, North Clark Street. Loss not reported. Resumed business again at 724 Wabash Avenue.

W. Handsome, 186 Chicago Avenue. Loss, \$2500; insurance, \$1700, Firemen's, Chicago; will not get insurance; not in condition to resume without aid.

M. Niedhart, 90 North Clark Street. Total loss, \$800.

Mr. Bodtker, 133 Chicago Avenue. Loss, \$900; total. Out of business unless he has aid to resume.

EMPLOYEES.

George Klein, with A. Hall. Loss, \$150; at work for Green & Hall.

H. E. Hulings, with B. P. Higgins. Loss, \$500. Out of business at present.

John Dillon, with O. F. Weaver. Loss, \$7500. With Green & Hall.

Mr. Cunningham, with J. H. Abbott. Lost situation and property; \$500.

O. W. Hodges, with S. W. Sawyer. Loss, \$200. Now making views.

Mr. Gilling, situation 75 Lake Street. Lost situation.

Young lad at 75 Lake Street. Not seen since the fire.

Mr. Robinson, operator for S. Wing. Loss, \$100. At work again. Mr. R. sacrificed his own effects to save those of his employer's.

Mr. Abbott had two at work at his Clark Street gallery. Out of business.

Mr. Abbott, at Washington Street gallery; two gentlemen, one lady. Lost situations.

S. M. Fassett employed four in his gallery, who lost their situations.

G. S. Moore's gallery; Mr. Carpenter, operator. Loss, \$150. Miss Morse, situation.

Mr. Slote, with Mr. Rocher. Loss \$500.

Mr. Schmidt, situation and \$50.

George Piper, \$100.

S. W. Sawyer's gallery; Mr. Sheldon, situation and \$200

Sawyer gallery; Miss Arvadson lost wardrobe.

Otto Muehligh, situation and \$60.

Mr. Stewart, situation and \$60.

Mr. Acharam, situation and \$40.

Mr. Wurgardi, situation and \$800.

P. T. Bielfelde, corner Wells and Division Sts. Total loss, \$3000.

W. S. Wheeler, with A. Hall & Son. Loss, \$200. Making views.

Mr. Barkman's gallery; lady lost situation.

Mr. Brand's gallery; Mr. Carson, operator, lost household goods; \$1500. At work for William Shaw.

Mr. Ryder, situation.

Mr. Spence, situation and \$50.

Barnard & Matthews' gallery; Mr. Devoe, situation; Mr. Pond, situation.

Mr. Mosher's gallery; Mr. Wolfe, situation.

Sawyer's gallery, Miss Wright, situation and wardrobe.

Two lads named Samuels, situations.

Wing's gallery; Miss Laura Kemberger, situation.

Niedhardt's gallery; lady, situation.

Miss Izart, at Copelein & Sons' gallery, 131 Lake Street, the heroine, lost situation.

Mrs. Handsome lost wardrobe.

Mrs. Johnson lost all her paintings, valued at \$300.

Mr. Lind, with Bodtke. Loss, \$100. Gone to Ottawa; working for his board.

A. Hall's gallery; Frederick Churchill, situation; Clara Jarvis, situation; boy, situation.

The above is as exact a statement of the necessities of the case as we are now able to make.

G. A. DOUGLASS,
Secretary.

THE NATIONAL PHOTOGRAPHIC ASSOCIATION.

As our readers will observe, only five more months intervene between this and the time of the Annual Exhibition of the National Photographic Association at St. Louis.

We hope to see the work there of many from the South and West who have heretofore thought the place of exhibition too far away from them to share in the display. We know there are many such, and we trust they will come to the aid of St. Louis valiantly, and show their colors. St. Louis is a beautiful and a growing city. There are many good photographers there, and warmer hearted men we never saw come from any city. Some of the instigators of the Association live there. They were present at its birth, and they have been to every Annual Meeting. Moreover, they say they expect to be at every future one. That is the spirit which enables men to advance and improve in their art, and which commands success. Let us give St. Louis a handsome display of work in May, 1872, and begin now to prepare for it. No doubt the able Local Secretary, Mr. Fitzgibbon, with his co-workers there, are devising ways of making the meetings interesting and valuable to all who are present. Let us overwhelm them with our numbers.

ANOTHER GOOD PLAN.—It has been suggested that perhaps there are those who would like to do something for the Chicago photographers, who have spare apparatus which they could give or lend with more convenience at present than to give money. If there are such, no doubt the Executive Committee would be glad to hear from them.



Answers.

1. The crystals E. P. L. alludes to are undoubtedly acetate of silver. In some way or other glacial acetic acid has been introduced into the bath, which would cause the crystals described.

3. I noticed several inquiries how to avoid crawling and "tear drops" in silvering paper, and the answer to the inquiry is to reduce the silver solution. I have been troubled the same way, but find an infallible remedy in rubbing the surface of the paper carefully, but briskly, with a tuft of cotton just previous to floating, and after floating to draw across the edge of the silvering dish.—WALLACE, *Mobile, Ala.*

4. In Sphynx for November, under the head of "Questions," is the following: "Want formula for a collodion to give very dense negatives, to be used with inferior light on a subject with little contrast; collodion to have fair keeping qualities."

In answer, I beg to offer the following, which I am quite sure will meet the wants of the querist, quite as well as any formula in the whole range of chemical combination possibly can. It will cost but little to try it, and may be of service not only to him but to many gentlemen who desire a clear, brilliant working collodion for copying maps, engravings, &c., &c.

Ether,	8 ounces.
Alcohol,	8 "
Iodide of Ammonium,	64 grains.
Iodide of Cadmium,	48 "
Chloride of Calcium,	18 "
Anthony's Snowy Cotton, <i>quantum suf.</i>	

Dissolve the excitants in the alcohol, then add the cotton and ether. Great care must be taken in the selection of the chloride of calcium, for on its purity depends the desir-

able qualities of the collodion. Either the fused or the crystallized may be used. It should be colorless, slightly transparent, hard, and friable. That made by P. & W., of your city, is preferred. Only the *hard lumps* should be used, which may be broken up in a mortar and a little of the alcohol added, when it will readily dissolve. A little age, four or five days, will greatly add to its working qualities.—J. A. McARTHUR, *Howard Medical College, Boston, Nov., 1871.*

5. See answer to No. 3.

Queries.

1. I should like to ask friend "Sphinx" what has become of O. P. Howe's (Augusta, Me.), photographic transfer plate? B. P. W.

2. I work the following formula, viz.:

COLLODION.

Ether and Alcohol, equal parts.

Iodide of Ammonium, . . 5 grains

Bromide of Potassium, . . 2 "

Gun-cotton, 7½ grains to the oz.

NEGATIVE SILVER BATH.

Silver, 1 ounce.

Water, 10 ounces.

DEVELOPING SOLUTION.

Sulphate of Iron, 2 ounces.

Soft Water, 1 quart.

Acetic Acid, 2½ ounces.

Can any one tell me why my negatives are so transparent, by reading the above? They are more like ambrotypes than anything else. I am compelled to redevelop or intensify every one. My first puzzle.—WM. H. R.

3. What is the correct distance from centre to centre for stereo lenses?

Three inches. See Prof. Towler's papers in September and October *Philadelphia Photographer*.—SPHYNX.

4. Will plain collodion keep for any length of time, and does it do to iodize a small quantity at a time, say five or six ounces?

Yes, and yes. Some collodions are sold in a normal state, and the iodizing solution in a different bottle.—SPHYNX.

5. Will oiling the ground-glass facilitate getting a better focus, or is plate-glass better?

Why don't you try the experiment?—SPHYNX.

6. Does a saturated solution of hypo used for fixing negatives by pouring on and off, have any bad effect on the same?

Why no; but it is easier to lay the plates in the solution and allow them to fix therein. It saves time.—SPHYNX.

7. Does it injure pyrogallic acid to be exposed to white light? does yellow protect it?

Yes, and yes.—SPHYNX.

8. How much stronger is glacial acetic acid than acetic acid No. 8?

The latter is a dilution of first.—SPHYNX.

9. What is the smallest stop that can be used with a lens in proportion to its focal length, to preserve the atmospheric effect of the picture?—S. E. C.

10. Seeing an article in the *Scientific American*, some months ago, giving a formula for making permanent sensitive paper, I undertook to try it. The formula was nitrate silver and citric acid, equal parts, dissolved in water, and strength about 40. The result was, a sensitive paper that would keep perfectly white for a month or longer, but being very acid would print brick-red, and when a print was finished would not be worth looking at. Suppose the trouble is too acid bath. Can you offer an improvement? A good (permanent for a month) sensitive paper is what is wanted.

11. Add carbonate, bicarbonate of soda, or ammonia to a solution of silver and citric acid, and a very white (milky) precipitate is formed. What is the chemical term of the precipitate, and why the precipitate?

12. Under what conditions does the image appear on an exposed plate before development? What causes different colored negatives, particularly purple? Have had a variety of colors, from gray to purple, but never knew the reason why.—INQUISITIVE.

13. I. When a printing silver solution is made according to Hovey's formula, thirty-five grains nitrate of silver to thirty-five grains nitrate of soda, or ammonia, what reactions take place (if any) between these salts? II. What are the signs of its exhaustion? III. How can you test its strength? IV. And finally, when the solution becomes so charged with albumen as to need rectifying, how do you accomplish it? V. The plain solution of silver or the ammonio-

nitrate formed by precipitating and redissolving the silver with ammonia, can be boiled down and the albumen *burnt out*. Can this simple process be used where the nitrates of ammonia or soda has been used?—H. B. H.

14. Mr. O'Neil's formula for a silver solution for paper, adds a small quantity of muriatic acid to a plain silver solution. This bath presents some features I cannot account for, nor have I seen any explanation of it. Theoretically the addition of muriatic acid to a solution of silver only precipitates chloride of silver, liberating nitric acid, and otherwise leaving the solution unchanged, except the small quantity of chloride of silver that the nitrate solution dissolves. Yet in practice you find this bath differs very materially from a plain solution of silver. Call the two solutions—No. 1, muriatic acid solution of silver, 35 grains; No. 2, plain solution of silver, 35 grains; and float a sheet of paper on each, and mark the result. Solution No. 1 will silver the same paper as thoroughly in thirty seconds as solution No. 2 will in two minutes,

and yield far more brilliant prints. After a few days' use solution No. 2 will turn red, and indeed soon becomes worthless from absorption of albumen, and every day yield poorer prints, while solution No. 1 can be worked for weeks without turning at all red, and will yield good prints until the strength is reduced to 15 to 20 grains. Now why this great difference? The shaking of chloride of silver in a discolored bath will close it up; we are told it acts mechanically, and the filtering through the old silver filter filled with chloride may account for its not coloring, by a process of daily discoloring, as it were; but how can you account for its rapid action upon the paper, and its brilliancy of printing qualities, for it seems to me that a 35-grain solution, No. 1, will in all respects give you as good effects as a 60-grain solution No. 2. Will some of your chemists answer?—H.

15. Will the old process of boiling down and burning out the albumen answer for both?

16. "How" is the best method of strengthening this bath?—H. B. H.

Editor's Table.

THE *Photographic World* for November contains a Woodbury print called "Both Puzzled," which is a very amusing picture and a good study; also the following articles: Photography Abroad—a Good Retouching Color; From my Diary; About the Chemical Focus; Backgrounds; Acid Toning Bath for Albumen Prints; Reduction of a Picture to a Given Size by Photography; Transparencies for the Lantern on Wet Collodion; Singular Property of Gun Cotton; Scroll Portraits; Notes In and Out of the Studio—Surface for Retouching and Fixing Pencil Retouching; Another Method of Reproducing Negatives; A Clear Tannin Solution; Nickel Plating for Metal Goods; A Comprehensive Plateholder; Developing Coffee Dry Plates; Lecturettes on Modern Chemistry; How to Empty the Bath and Other Solutions; On the Effect of Sensitizers in the Dry Process; 1872 Mosais; Photography for Boys; Losses of Photographers in Chicago; Position and Composition; How to Make a Good Dipper; On Printing; Proceedings of the Hypo Club; Photographs

Unmounted for Books; Silver Splashes; Our Picture; All the World Over; Table Talk; Editor's Table, altogether making a most valuable number. All who read the *Philadelphia Photographer* should read the *World* also. One magazine cannot begin to contain all the things you ought to know, and the *World*, besides giving a great deal of home matter, also gives the *best* of the foreign matter published. Please read the new prospectus of the *World* in this issue, and secure the back numbers before they are all gone.

RENEW.—Please do not forget to renew your subscriptions as early as convenient. We provide order blanks with this number. Please fill them up *now* and return them, so that your Journal may go to you promptly.

Employers will find the *Philadelphia Photographer* and the *World* most acceptable holiday presents to their employees. Try it, and we guarantee you will get your money back, by extra effort in your behalf. Employers doing this may have the advantage of the premium list,

PROF. MORSE AND HIS CAMERA.—We are happy to announce that with our January number, 1872, the opening of a new volume, we shall present our patrons with a splendid portrait by A. Bogardus, Esq., of the venerable father of American photography, Prof. S. F. B. Morse, with the ancient camera and lens he used—the first in America—on the table by his side. It is the most interesting photograph we ever published. Parties wanting extra copies should send in their orders early. A sketch of the life of Prof. Morse will accompany the number.

VIEWS OF CHICAGO IN RUINS.—Mr. Henry Rocher has sent us from his new studio, now in full blast at 724 Wabash Avenue, Chicago, an admirable series of stereographs of the ruins. We anticipated something picturesque and impressive from Mr. Rocher's artistic skill, and we are not disappointed. The dreadful doom of Chicago is pictured here in a way which hardly actual presence could delineate it. The subjects are carefully chosen. Made in a good light, the negatives are admirably clean, and there is none of the evidence of haste about them, which some of the views we have seen too plainly show. They are also neatly and beautifully mounted.

Mr. Rocher was the first sufferer by the fire to open a new gallery in Chicago, and we are glad to hear that he is overwhelmed with business. He gives as a piece of *good news* the following:

"I found a good-hearted (very fashionable) young lady who lost all by the fire but one dress and her good humor, and on my inviting her to sit for the first picture made in the new studio, she assented, and also agreed to allow me to send you the negatives for embellishing the *Philadelphia Photographer*."

This is capital. So if we all live, in our next February number our readers shall see *the first portrait made in a new Chicago gallery after the fire*. At the same time we shall present diagrams of Mr. Rocher's new and beautiful studio, with a full description of it. Long live and prosper Mr. Rocher.

MR. P. B. GREEN, Chicago, has also sent us some very superior views of the ruins, which equal in execution the best that have been made. Poor Chicago! Neither by a genuine or a premature old age hast thou thus been rendered so picturesque, giving the photographer who has the skill of Green an opportunity of enriching himself upon thy ruins, but *by fire*, and thy tottering remains are here before us, so that when thou art rebuilt we may look upon thy desolation, and glory in the glory of the camera.

BOWMAN'S VIEWS OF THE CHICAGO RUINS.—

Before us are nearly fifty stereographs of the Chicago ruins by Mr. W. E. Bowman, Ottawa, Illinois, selected by him for us from a list of over one hundred and twenty-five choice subjects. They have been selected by a true artistic eye, and many of them are charmingly picturesque. As we look over them, our mind wanders, and we are carried back to the magnificent ruins of England and Scotland, immortalized by the pen of Scott and the camera of Wilson. Mr. Bowman writes us that he is selling tens of thousands of these views, having ten printers at work on them constantly. He has a most elaborate set of negatives, and supplies the trade with prints on good terms.

MR. LANDY'S views of the Chicago ruins, noticed by us in the *World*, are 14 x 17 instead of 11 x 14 as we there stated. We have received some more, kindly sent us by him, and we have seen nothing so large made of the ruins, as they are. They are also splendid specimens of outdoor work, and excel anything we have seen. The ruins of some of the principal buildings are numbered, and a list given below, so as to give us a guide to, as well as a view of, the ruins.

MR. O. S. FOLLETT, formerly of 129 Grand Street, N. Y., whom our readers will many of them remember pleasantly, has connected himself in business with Mr. William B. Holmes, No. 555 Broadway, N. Y., where he will be glad to see or hear from his friends, old and new. Such a twain as Messrs. Holmes and Follett must make a lively trade at the "three fives," and we wish them every success in their efforts to cater to every want of the Photographers.

ITEMS OF NEWS.—A most curious thing occurred at the Albumenized Paper Manufactory of Jno. R. Clemons, No. 915 Sansom Street, Philadelphia, a few days ago. Mr. Clemons was just going out when a barrel, containing fifty dozen fresh eggs from a neighboring village, was brought to his front door. He ordered his assistants to hoist them up stairs. *When he returned in about an hour the whole fifty dozen eggshad been hatched!* We have this from Mr. Clemons's own lips as being a fact. We shall try to learn further particulars, and report in our next. Mr. J. W. Black is delighting New England and the rest of Boston with magnificent Stereopticon Exhibitions. His programme "No. 1" includes views in the Polar Seas and in the Holy Land, and No. 2, Black's famous trip around the world. He is doing a good work for photography too,

for he exhibits none but its best productions. Mosaics for 1872 is ready, and contains fifty-three splendid practical articles on photography, which are sold for fifty cents—less than one cent for each article. Mr. W. J. Land, Atlanta, Ga., has sent us a beautifully printed price-list of his chemicals and other goods. Mr. D. H. Anderson, Richmond, Va., has received a medal “for the best photograph by a resident of Virginia,” at the late Virginia State Fair; good! We learn, by a New York paper, that Scovill Manufacturing Company, New York, gave \$500 to the Chicago sufferers. They are always ahead with their charities as well as in many other things. Dr. Vogel’s Handbook of Photography is the standard work; now is your chance to get and read it. Mr. N. C. Thayer, formerly of Chicago, has purchased the business of J. W. Willard & Co., New York, and opened a new store at 609 Broadway, retaining the services of Messrs. Willard and Baldwin. Messrs. Bendann Bros., Baltimore, offer their gallery for sale in that city, and Jan. 1st enter into copartnership with Mr. Bogardus in New York. Mr. Daniel Smith, well known to many photographers while with Holmes, Booth & Haydens, afterwards of the firm of Bryant & Smith, and since then with Mr. Wm B. Holmes, New York, died on the 5th inst. He was amiable and pleasant, and generally liked.

CHICAGO PHOTOGRAPHERS RELIEF FUND.—Read what is said elsewhere on this subject, and be alive and lively in the matter.

MAGIC LANTERN SLIDES.—Mr. James Cremer, No. 18 South Eighth Street, Philadelphia, has gone earnestly into the manufacture of magic lantern slides, and is meeting with great success with them, both in the sale of them and in the admirable quality of the work. He sent us some for our Marcy sciopticon, which are exquisite, being mainly views, most artistically chosen, of our Fairmount Park, the Wissahickon city views, &c. Mr. Cremer deserves a great deal of credit for pushing this branch of photography. There are many others who will have to follow his example sooner or later, for, our word for it, the sale of such things is bound to be immense in this country.

ANOTHER PHOENIX.—Mr. A. A. Baldwin, Ludlow, Vt., who was burned out last spring, has sent us photographs of his new rooms, which he has just recently occupied, and which we think must be very neatly arranged and convenient. We wish him abundant success in retrieving his losses. A specimen of his work before us, of a young lady with dark hair and light dress, shows

him to be able to combat with even such difficult subjects as that, only we don’t like to see the delicate middle tints of a pretty face destroyed by “mezzotint” printing. Don’t do it.

PICTURES RECEIVED.—We know there are plenty of good photographers in the South, all the way down to Texas, but it is very seldom they think to show us the evidences of their progress. Imagine our pleasure and surprise, therefore, on receiving a few days ago from Mr. L. S. Washburn, 113 Fourth Street, Louisville, Kentucky, several splendid cabinet pictures of exquisite finish, and fully up in other good qualities to the highest average work. They have not a touch of the brush upon them, and are full of delicacy and half tone. Mr. Washburn promises to make us some negatives, and presently our readers shall see how well he can do. Another surprise comes to us from the West from Messrs. Montfort & Hill, Burlington, Iowa, in the shape of a number of splendidly executed cartes. These gentlemen have certainly made a great progressive leap since we were in their gallery in 1869. They have special “luck” with infants. They have just occupied new and splendid rooms. Mr. L. H. Freeborn, Des Moines, Iowa, another progressive photographer, has sent us some very creditable cabinet photographs, which show him to be improving rapidly. Mr. W. H. Cook, operator for Mr. W. Hile, Greensburg, Pa., will please have thanks for specimens of his work.

“PUBLIC OPINION,” G. Wharton Hamersly, Publisher, 4938 Germantown Avenue, Philada. Weekly, \$3 a year. Those who haven’t the time to wade through the contents of home and foreign newspapers, and who haven’t the money either to buy them, and who wish to keep informed on all matters of interest in art, science, politics, &c., will find a valuable thing in *Public Opinion*. It is a capital paper, edited with taste and ability, and must succeed quite as well as we earnestly wish it to.

AYRES’S CHART.—Mr. J. P. Spooner, Stockton, Cal., writes us as follows: “Let me thank you for ‘Ayres’s Photographic Chart.’ It is valuable indeed, and it is really amusing to hear the opinions of photographers upon it. Here is an example: ‘What’s this, Spooner? What’s the use of *this thing*?’ says one of them. Being told, he answered, ‘I would not give two bits (a quarter) for a dozen of them.’ Do you wonder that such an elevated mind cannot make good work?” We do *not* wonder. A photographer must be willing to learn if he would succeed.

